Financial Institutions and Markets

Structure, Growth and Innovations

Sixth Edition

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McGraw Hill Education (India) Private Limited

Published by McGraw Hill Education (India) Private Limited
444/1, Sri Ekambara Naicker Industrial Estate, Alapakkam, Porur, Chennai - 600 116

Financial Institutions and Markets: Structure, Growth and Innovations, 6e

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This edition can be exported from India only by the publishers,
McGraw Hill Education (India) Private Limited

Print Edition
ISBN-13: 978-93-5260-541-5
ISBN-10: 93-5260-541-1

E-Book
ISBN-13: 978-93-5260-542-2
ISBN-10: 93-5260-542-X

Managing Director: *Kaushik Bellani*

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Typeset at The Composers, 260, C.A. Apt., Paschim Vihar, New Delhi 110 063 and printed at

Cover Printer:

Visit us at: www.mheducation.co.in

Preface to the Sixth Edition

It is our pleasure to present the sixth revised and updated edition of our book *Financial Institutions and Markets: Structure, Growth and Innovations*. This edition of the book seeks to provide an up-to-date information and knowledge of all the major changes, developments and innovations that have occurred in the Indian financial system till March 2017. Keeping the interests of both undergraduate and post graduate students in mind, with the updated information, this edition expands the theoretical concepts related to all the financial institutions and markets operating in a financial system. Equal amount of emphasis has been given to numerical examples at various places for better understanding of theoretical concepts. While carrying out the revision, the approach has been not only to incorporate all the latest information and emerging trends, but also to retain the relevant information of the past.

Additions/Revisions

The major specific additions and revisions made in this edition are as follows:

- All the chapters in the book have been reorganised and restructured considering the recent developments and emerging issues in the financial system of India.
- All the chapters are revised and updated in terms of recent data and major developments taken with respect to that particular financial institution or market.
- Broad functions of financial system have been highlighted and the discussion on financial services has been expanded.
- Data on global markets has been analysed in various chapters subject to their availability.
- Discussion on economic analysis, industry analysis and company analysis has been further elaborated.
- Discussion on many emerging issues like financial inclusion, retail investors behaviour in India and demonetisation and its impact on Indian economy have been introduced in the overview chapter. A summary of the financial sector assessment report has also been added.
- Recently introduced major policy reforms with respect to banking, stock markets, government securities market, derivatives market, foreign exchange market, etc. have been incorporated. Major initiations taken by the Government of India like establishment of National Institute of

Transforming India (NITI) Aayog, Gold monetisation scheme and new 5-year foreign trade policy have been discussed in the chapter on financial sector reforms.

- A new chapter on 'Financial Regulations in India' has been introduced. This chapter deals with the theories of regulation, regulatory approaches, multiple verses single regulator and also highlights the major acts linked to the regulation of financial system of India.
- Discussion on phase-wise monetary policy operations in India has been introduced. Discussion on Liquidity Adjustment Facility (LAF) has been revised. A summary of report by the expert committee on strengthening the monetary policy framework has been included.
- A new chapter titled 'Other Regulatory Institutions in India: SEBI, PFRDA and IRDA' has been added. This chapter deals with the various aspects of the functioning of SEBI, PFRDA and IRDA, which are the major regulators of the Indian financial system.
- Major services provided by the commercial banks such as online banking, credit card operations, mobile banking, and so on have been added in the commercial bank chapter. Discussions on the financial statements, financial performance measures, non-performing assets, international banking, Basle-III norms and its implications on Indian banks have been introduced in this chapter.
- Section on evolution of co-operatives in India has been introduced in the chapter on co-operative banks. This chapter is updated in terms of growth and significance of co-operative banks in India.
- The discussion on types of instruments in small savings media has been elaborated. The section on provident funds has been updated and discussion on the architecture of the New Pension System (NPS) has been introduced. The features of NPS have also been expanded. Features of NPS Swavalamban and Atal Pension Yojana have been included. Data on NPS and various pension schemes has been updated.
- Discussion on principles of insurance has been introduced in the chapter on Insurance. The data and policy developments related to the insurance sector in India have been revised.
- The chapter on mutual fund has been updated with the inclusion of elaborate discussion on concepts related to mutual fund, classifications of mutual fund schemes, mutual fund performance evaluation, hedge fund and systematic investment plan.
- Recent classification of miscellaneous non-bank financial intermediaries and new regulatory framework of non-bank financial companies registered with the Reserve Bank of India (RBI) have been highlighted. The discussion on credit rating agencies in India has been expanded.
- Discussion on many non-bank statutory financial organisations has been introduced.
- The chapter on 'Call Money Market' has been updated and expanded introducing the discussion on the Mumbai Interbank Bid Rate and Mumbai Interbank Offer Rate and London Interbank Offer Rate (LIBOR).

- Chapter on Treasury Bills has been reviewed introducing the discussion on cash management bill, types of auctions held in issuing treasury bills and calculation of the yield of the treasury bills.
- A new chapter on 'Miscellaneous Short-term Financial Markets in India' has been designed with the merger of the chapters on commercial papers, certificate of deposits, commercial bill, discount and financial guarantees markets given in the previous edition of the book.
- Considering the current trend and interest of the students, chapters on Government Securities Market and Industrial Securities Market in the previous edition of the book have been renamed and restructured as 'Bond Market and Stock Market'.
- The chapter on bond market deals with the basic features of the bonds, risks involved in bond investments, valuation of bond, yield measures and yield curves. Further, this chapter discusses the nature, growth and significance of the Government Securities Market, Corporate Bond Market and Public Sector Undertaking bonds. The auction process of government dated securities has been introduced with suitable examples.
- Chapter on stock market has been developed and revised, introducing the discussion on the valuation of stocks, functioning of both primary and secondary stock market, impact of investor's sentiment on stock price, construction of stock market indices, stock price quotations, exchange traded fund, stock market liquidity, market microstructure in Indian stock market, margin trading, short selling and index-based market wide circuit breakers.
- Discussion on instruments like weather derivatives, freight derivatives and property derivatives have been added in the derivatives market chapter. This chapter is also revised and expanded introducing the discussion on the important concepts used in the derivatives market. The section on pricing of the derivative instruments has been revised with the inclusion of many mathematical derivations and numerical examples.
- The chapter on foreign exchange market has been restructured and updated with respect to data, policy developments and major issues related to foreign exchange market in India.
- Discussion on various types of Non-Resident Indian (NRI) deposits, Foreign Direct Investment (FDI) and Foreign Institutional Investment (FII) has been expanded. A new section on FDI in retail sector in India has been introduced.
- Section on the theories of term structure interest rates has been expanded and the chapter on interest rates in India has been restructured, and updated in the light of recent data and policy measures.

Learning Aids

- Additional Questions, Keywords and References.
- Updated Glossary and Index.
- New box items within chapters for better understanding of the concepts.

Acknowledgements

We have received a great deal of help from friends, students and family members while working on this revision. Mr Byomakesh Debata helped us collecting information and data, preparing tables, typing the equations and examples for various chapters. We are very much thankful to him. Similarly, Mrs Seba Mohanty and Mr Gaurav Gupta helped us to collect data and prepare tables for certain chapters. We would like to thank both of them for their help. We are thankful to Mr Neeraj Gupta, Mrs Lopamudra Satpathy and Mr Sunil Sangwan for helping us in collecting information to revise and update various chapters. We would like to thank Mr Gaurav Gupta and Ms Jyotirmayee Satapathy for their help in preparing the index for the book. We also thank Upasana, Anamitra and Ansruta for providing moral and emotional support to complete the revision of the book. We extend our thanks to RBI, SEBI, PFRDA, IRDA, BSE and NSE for making their publications available to us. Our special thanks are due to Mr Hemant K. Jha, Ms Laxmi Singh and Mr Suhaib Ali of McGraw Hill Education, India, for their warm interaction, which helped us to keep up the tempo while carrying out the revision.

Finally, we would like to thank the readers for their positive response to the earlier editions of this book, which has induced and inspired us to take up the revision for the sixth edition.

L. M. Bhole
Jitendra Mahakud

Preface to the First Edition

The present book is about the organization, operation, and growth of the financial system in India. A student of money and finance often finds that monetary and financial policies can be understood much better, and they can be analysed more realistically if he has a good understanding of the actual functioning of the various parts of the financial system. The purpose of this book is to provide such an understanding of the working of financial markets and institutions primarily in India, but wherever appropriate the reference has also been made to the situation in certain other economies such as the USA and the UK.

Contrary to the general impression, the financial sector in India has developed tremendously since the beginning of economic planning. It was but natural that this development should have been accompanied by a growing interest and literature in the subject of financial system. However, most of the existing Indian books in this area contain only a partial treatment of the subject in the sense that they have tended to concentrate their attention on the discussion of financial institutions and have presented very inadequate or no treatment of many of the really important financial markets in the country. Further, they have approached the subject matter mainly from the perspective of industrial financing rather than its manifold dimensions. The merit of this book is that it gives the reader a fairly complete idea about the functioning of the whole set of banking and non-banking financial institutions as well as all the markets for short-term and long-term financial instruments and financial services in all their major aspects in a single volume. Since the price of finance is a very important dimension of the financial system, it also discusses at some length the theory and actual behaviour of interest rates. The book highlights the growth of the financial system in respect of its size, changes in its organizational structure, and the occurrence of diversification and innovations in financial instruments and practices. While doing so, it combines the factual and analytical aspects of the discussions in a balanced manner.

The time span covered in the book is a fairly long one. The detailed discussion pertains to the period of about three decades, that is 1951-52 to 1978-79. But in order to place this discussion in an historical perspective, the working of the financial system 60-70 years before the advent of planning has also being briefly described. A large amount of upto date time series data on all the aspects of the financial system pertaining to the period under discussion has been made

available to the reader for ready reference. However, since the financial sector is continuously evolving, a more interested reader must refer to certain current data sources if he wants to know the latest developments in the exciting world of finance.

The book is divided in four parts. Part I with two chapters presents an overview of the financial system. Part II consists of six chapters which deal with different financial institutions such as the Reserve Bank of India, commercial banks, cooperative banks, small savings organization, non-bank financial intermediaries and non-bank statutory financial organizations or special financial institutions. Part III consists of eleven chapters which discuss the markets for different financial instruments and services such as treasury bill, call money, bill of exchange, mortgages, financial guarantees, and company deposits. In Part IV, matters relating to the theory of and the empirical evidence on the level and structure of interest rates have been discussed.

It is hoped the book would be useful to those members of university and college faculties whose teaching and research interests lie in the area of banking, finance and monetary economics. It may also serve as a reference or supplementary text in graduate and postgraduate courses in the areas just mentioned. Further, it can be expected to be useful to corporate researchers or financial officers in their understanding of the operations of the financial system.

The idea of writing this book was conceived when I was working on the chapter on financial innovations and monetary policy to be included in the research project report to be submitted by me to the Indian Council of Social Science Research. I would like to thank here the ICSSR for having approved the grants-in-aid for the said research project. My thanks are also due to the Curriculum Development Programme in the Indian Institute of Technology, Mumbai, for providing financial assistance to cover typing and other expenses involved in the preparation of the typescript of this book.

I am thankful to Mr S Suri for having contributed a chapter on Cooperative Banking, and also for helping me in correcting the proofs. I wish to thank Mr M Thiripal Raju for rendering me research assistance in preparing this book, and also for preparing the index cheerfully. Mr Ranga Sai also deserves my thanks for his sincere research assistance for a short while. Mr N Krishnan prepared a chapter on the foreign exchange market and I would like to thank him for the same.

My thanks are due to Mr D B Surve and Mr Kunjukunju also for doing a neat and prompt job of typing the manuscript. Finally, I wish to thank IDBI, ICICI, UTI, and LIC for making available to me some of their publications.

L. M. Bhole

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Part 1

Overview

The financial system plays a significant role for economic development as it provides the payment system for the exchange of goods and services and also provides financial capital for long-term capital formation. The financial system consists of financial institutions and financial markets. These institutions and markets provide various financial instruments and financial services through which funds are transferred from savers to investors. The value of all the assets available in the financial system largely depends on the risk and return associated with these assets. The efficiency of the market is another important issue, which is characterised on the basis of availability of the information and the transaction costs involved for trading of these assets. Indian financial system has undergone many significant changes over the years due to the economic liberalization and various policy measures taken to develop the system as a whole. The reforms are carried out in all the segments of the financial system, which include money market, stock market, mutual funds, banks, government securities market, derivatives market and foreign exchange market. The chapters in this part deal with all these above-mentioned issues.

CHAPTERS

1. Nature and Role of Financial System

2. Introduction to Security Analysis

3. An Overview of Indian Financial System

4. Financial Sector Reforms

The Nature and Role of Financial System

1 CHAPTER

Learning Objectives

LO 1 Recognise the functions and structure of a financial system
LO 2 Know how the equilibrium price in the financial market is determined
LO 3 Identify the role of the financial system in economic development
LO 4 Explain the meaning and process of financial development
LO 5 Understand a cautionary view of the role of the financial system in development
LO 6 Discuss the criteria to evaluate the performance of the country's financial sector

1.1 INTRODUCTION

The financial system deals with the financial transactions and the exchange of money between savers, investors, lenders and borrowers. Financial systems are made of different intricate and complex models that portray financial services, institutions and markets that link institutions, markets, financial instruments and financial services, which cater to the financial services for various stakeholders operating in the financial system such as depositors, lenders, borrowers, government and others. The financial system can be defined at global-, country-, state- or firm-specific levels. This chapter presents the bare elements of a financial system which will be discussed in detail in the subsequent chapters. It discusses the constituents, economic developmental contribution and constraints, performance criteria of the financial system and certain concepts in its development.

1.2 MAJOR FUNCTIONS OF THE FINANCIAL SYSTEM

LO 1
Recognise the functions and structure of a financial system

The financial system of an economy serves different functions. Some of the major roles of any financial system are given below:

- It provides payment system for the exchange of goods and services in the economy.
- It provides the mechanism to pull the funds in terms of household savings for corporate investments.

- It provides the financial capital for long-term capital formation for the government and business organisations.
- It facilitates the investors and other market participants to liquidate their investment alternatives like stocks and bonds and so on.
- It provides the avenues for managing the risks faced by the market participants.
- It takes care of both short- and long-term needs of the market participants.
- It supplies the required financial capital to government for public expenditure on the social welfare activity, infrastructure development and so on.
- It provides the price information which helps to coordinate the decentralised decision-making process in the various sectors.
- It helps in reduction of the asymmetric information and moral hazard problems which in turn facilitates in reducing the transaction costs.
- It creates different investment opportunities for the investors to maximise their return.
- It helps in efficient allocation of financial resources.
- It plays a significant role for economic growth as it helps to create the demand and supply of the funds through which the interest rates are determined in various markets. Changes in interest rates affect the money supply, inflation rate and also the possibility of the foreign investments.

1.3 STRUCTURE OF THE FINANCIAL SYSTEM

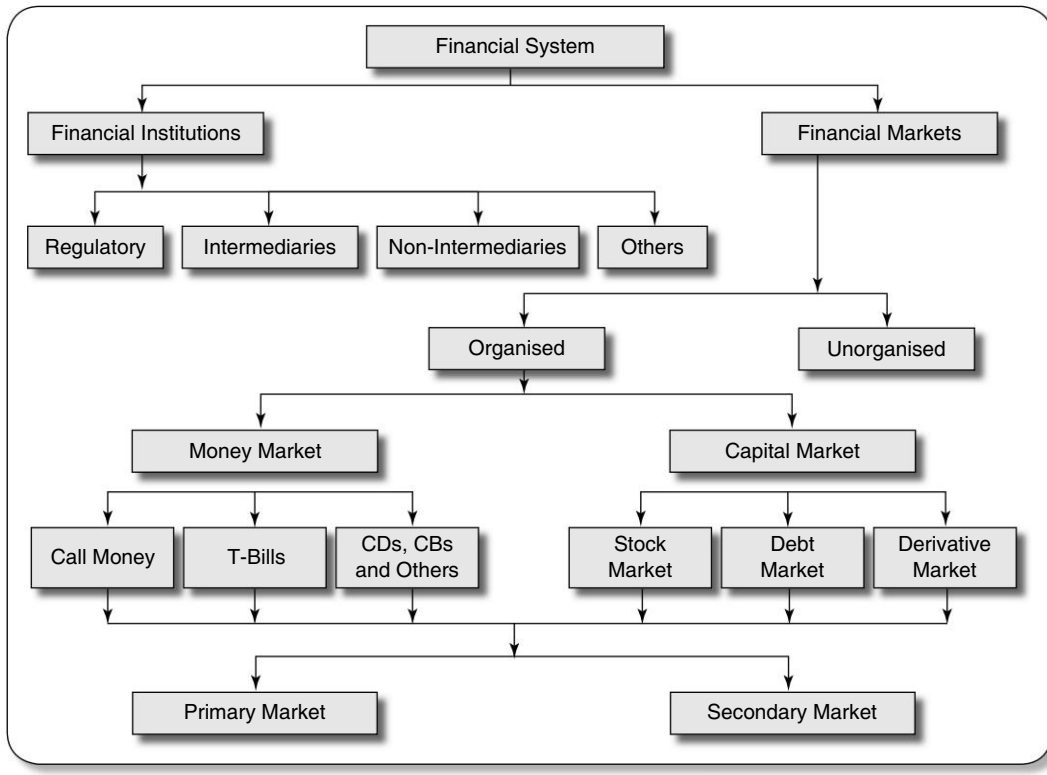

Figure 1.1 **Financial system—various parts and types of classification.**

The financial system or the financial sector of any country consists of (a) specialised and non-specialised financial institutions, (b) organised and unorganised financial markets, and (c) financial instruments and services which facilitate transfer of funds. Procedures and practices adopted in the markets, and financial interrelationships are also part of the system. These parts are not always mutually exclusive. For example, the financial institutions operate in financial markets and are, therefore, a part of such markets. The word 'system' in the term 'financial system' implies a set of complex and closely connected or intermixed institutions, agents, practices, markets, transactions, claims and liabilities in the economy. The financial system is concerned about money, credit and finance—the terms intimately related, yet, somewhat different from each other. **Money** refers to the current medium of exchange or means of payment. **Credit** or **loan** is a sum of money to be returned normally with interest; it refers to a debt of economic unit. **Finance** is monetary resources comprising debt and ownership funds of the State, company or person. Figure 1.1 presents a typical structure of the financial system in any economy.

1.3.1 Financial Institutions

Financial institutions are business organisations that act as mobilisers and depositories of savings, and as purveyors of credit or finance. They also provide various financial services to the community. They differ from non-financial (industrial and commercial) business organisations with respect to their wares, that is, while the former deal in financial assets such as deposits, loans, securities and so on, and the latter deal in real assets such as machinery, equipment, stocks of goods, real estate and so on. The distinction between the 'financial sector' and the 'real sector' should not be taken to mean that there is something ephemeral or unproductive about finance. At the same time, it means that the role of the financial sector should not be overstressed. The activities of different financial institutions may be either specialised or they may overlap; quite often they overlap. Yet, we need to classify the financial institutions and this is done on such basis as their primary activity or the degree of their specialisation in relation to savers or borrowers with whom they customarily deal or the manner of their creation. In other words, the functional, geographic and sectoral scope of activity or the type of ownership are some of the criteria which are often used to classify a large number and variety of financial institutions which exist in the economy. However, it should be kept in mind that such classification is likely to be imperfect and tentative.

1.3.2 Classification of Financial Institutions

Banking and Non-Banking Institutions

According to one classification, financial institutions are divided into banking and non-banking ones. The banking institutions have quite a few things in common with the non-banking ones, but their distinguishing character lies in the fact that, unlike other institutions, (a) they participate in the economy's payments mechanism, that is, they provide transactions services, (b) their deposit liabilities constitute a major part of the national money supply, and (c) they can, as a whole, create deposits or credit, which is money. Banks, subject to legal reserve requirements, can advance credit by creating claims against themselves, while other institutions can lend only out of resources put at their disposal by the savers. The distinction between the two has been highlighted by Sayers by characterising the former as 'creators' of credit and the latter as mere 'purveyors' of credit.[1] While the banking system in India comprises the commercial banks and cooperative

[1] Sayers, R.S., *Modern Banking*, Oxford University Press, Oxford, 1964.

banks, the examples of non-banking financial institutions are Life Insurance Corporation (LIC), Mutual Fund Institutions (MFIs) and other non-banking financial companies (NBFCs).

Intermediaries and Non-Intermediaries

The financial institutions are also classified as intermediaries and non-intermediaries. As the term indicates, intermediaries intermediate between savers and investors; they lend money as well as mobilise savings; their liabilities are towards the ultimate savers, while their assets are from the investors or borrowers. Non-intermediary institutions also lend money but their resources are not directly obtained from the savers. All banking institutions are intermediaries. Many non-banking institutions also act as intermediaries and when they do so they are known as non-banking financial intermediaries (NBFIs). The UTI, LIC and GIC are some of the NBFIs in India. The non-intermediary institutions like IFC and NABARD have come into existence because of governmental efforts to provide assistance for specific purposes, sectors and regions; their creation as a matter of policy has been motivated by the philosophy that the credit needs of certain borrowers might not be otherwise adequately met by the usual private institutions. Since they have been set up by the government, we would call them non-banking statutory financial organisations (NBSFOs). Certain significant changes which have, of late, taken place in the nature of NBSFOs have been indicated in Chapter 14.

1.3.3 Financial Markets

Financial markets are the centres or arrangements that provide facilities for buying and selling of financial claims and services. The corporations, financial institutions, individuals and governments trade in financial products on these markets either directly or through brokers and dealers on organised exchanges or off-exchanges. The participants on the demand and supply sides of these markets are financial institutions, agents, brokers, dealers, borrowers, lenders, savers and others who are inter-linked by the laws, contracts, covenants and communication networks.

1.3.4 Classification of Financial Markets

Primary and Secondary Markets

Financial markets are sometimes classified as primary (direct) and secondary (indirect) markets. The primary markets deal in the new financial claims or new securities and, therefore, they are also known as the new issue markets. On the other hand, secondary markets deal in securities already issued or existing or outstanding. The primary markets mobilise savings and they supply fresh or additional capital to business units. Although secondary markets do not contribute directly to the supply of additional capital, they do so indirectly by rendering securities issued on the primary markets' liquid. Stock markets have both the primary and secondary market segments.

Money and Capital Markets

Very often the financial markets are classified as money markets and capital markets, although there is no essential difference between the two because both perform the same function of transferring resources to the producers. This conventional distinction is based on the differences in the period of maturity of financial assets issued in these markets. While the money markets deal in the short-term claims (with a period of

maturity of 1 year or less), the capital markets do so in the long-term (maturity period above 1 year) claims.[2] Contrary to the popular usage, the capital market is co-extensive not only with the stock market, but is much wider than the stock market. Similarly, it is not always possible to include a given participant only in either of the two (money and capital) markets. Commercial banks, for example, belong to both. While treasury bills market, call money market, and commercial bills market are examples of the money market, stock market and government bonds market are the examples of the capital market. Equity market, debt market and derivatives market can be said to be the parts of the capital market.

Keeping in view different purposes, financial markets have also been classified into the following categories: (a) organised and unorganised, (b) formal and informal, (c) official and parallel, and (d) domestic and foreign. There is no precise connotation with which the words unorganised and informal are used in this context. They are quite often used interchangeably. The financial transactions which take place outside the well-established exchanges or without systematic and orderly structure or arrangements constitute unorganised markets. They generally refer to the markets in villages or rural areas, but they exist in urban areas also. Inter-bank money markets and most foreign exchange markets do not have organised exchanges. But they are not unorganised markets in the same way the rural markets are. The informal markets are said to usually involve families and small groups of individuals lending and borrowing from each other. This description cannot be strictly applied to the foreign exchange markets, but they are also mostly informal markets. The nature, meaning and scope of activities of these types of markets will be discussed later in the book.

1.3.5 Financial Instruments and Services

As mentioned earlier, financial systems deal in financial services and claims or financial assets or securities[3] or financial instruments. These services and claims are many and varied in character. This is so because of the diversity of motives behind borrowing and lending. The stage of development of the financial system can often be judged from the diversity of financial instruments that exist in the system. It is not possible here to discuss individually the nature of various financial claims that exist in the Indian financial system. We will tackle this later, and meanwhile we will just touch upon the general characteristics of these claims.

Financial Assets

The financial asset represents a claim to the payment of a sum of money sometime in the future (repayment of principal) and/or a periodic (regular or not so regular) payment in the form of interest or dividend. With regard to bank deposit or government bond or industrial debenture, the holder receives both the regular periodic payments and the repayment of the principal at a fixed date. Whereas with regard to ordinary share or perpetual bond, only periodic payments are received (which are regular in the case of perpetual bond but may be irregular in the case of ordinary share).

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[2]Sometimes, the analysts talk of the short-term (maturity period of a year or less), the medium-term (maturity period of 1, 3 or 5 years) and the long-term (maturity period of more than 3 or 5 years). The capital market, then, would be said to deal in medium- and long-term claims.

[3]The term security sometimes causes some confusion. This is because it is used to describe two different, though fundamentally related, things or phenomena. Security, in one sense, is a document or certificate as evidence of loan (as in the case of bond or deposit) or supply of capital in some other form (as in the case of shares). However, the document may take many forms. For example, in the case of certain bank deposits, it may be a bank passbook only. Another meaning of security is a thing deposited or pledged as guarantee of the fulfilment of some undertaking or payment of loan, which can be forfeited in case of failure. It is interesting to note that the security in the former sense can be used as security in the latter sense.

Financial Securities

Financial securities are classified as primary (direct) and secondary (indirect) securities. The primary securities are issued by the ultimate investors directly to the ultimate savers as ordinary shares and debentures, while the secondary securities are issued by the financial intermediaries to the ultimate savers as bank deposits, units, insurance policies and so on. For the purpose of certain types of analyses, it is also useful to talk about ownership securities (viz. shares) and debt securities (viz. debentures, deposits). Financial instruments differ from each other with respect to their investment characteristics which, of course, are interdependent and interrelated. Amongst the investment characteristics of financial assets or financial products, the following are important: (i) liquidity, (ii) marketability, (iii) reversibility, (iv) transferability, (v) transactions costs, (vi) risk of default or the degree of capital and income uncertainty, and a wide array of other risks, (vii) maturity period, (viii) tax status, (ix) options such as call-back or buy-back option, (x) volatility of prices, and (xi) the rate of return—nominal, effective and real.

Financial Services

These are defined as the products and services offered by financial institutions and markets for the facilitation of various financial transactions and other related activities. Major services provided by the Indian financial system include banking, investments, merchant banking, credit rating, hire purchasing, factoring, underwriting, loan services for housing and industrial loans and so on. The banks provide the banking services, which include the acceptance of deposits and providing loan for various transaction purposes. Investment companies invest money on behalf of their clients who, in return, share in the profits and losses. The merchant banks deal with the services related to international finance, loans for the companies and underwriting services. A hire purchase service is a method of buying goods through making payments in instalments over the time. The credit rating agencies provide credit rating services, which help the investors to choose proper bonds and shares for investments. Factoring is a type of transaction service in which a business unit sells its invoices or receivables to a third-party financial company, which is known as a factor. Factoring is also known as accounts receivable financing.

1.4 EQUILIBRIUM IN FINANCIAL MARKETS

LO2
Know how the equilibrium price in the financial market is determined

Like the general price level and relative prices in commodities markets, we have the general level and structure of interest rates which govern the financial markets. The terminology, theories and controversies regarding the determination of the level and structure of interest rates in India would be fully discussed in the last two chapters of this book. However, it would be appropriate to briefly discuss how the equilibrium price in financial markets is theoretically determined. The equilibrium in financial markets is usually determined by assuming that there would be perfect competition, and by using the well-known tool of supply and demand.

Financial markets are said to be *perfect* when,

(a) a large number of savers and investors operate in markets,

(b) the savers and investors are rational,

(c) all operators in the market are well informed and information is freely available to all of them,

(d) there are no transactions costs,

(e) the financial assets are infinitely divisible,

(f) the participants in markets have homogeneous expectations, and

(g) there are no taxes.

Under these ideal conditions, the financial markets attain the equilibrium position when the supply and demand are equal to each other, that is, the supply curve and the demand curve intersect with each other. The question which naturally arises here is the supply of and demand for what. There is a great deal of controversy amongst economists in this regard, and this has resulted in different theories of equilibrium price (interest rate) in financial markets. Briefly speaking, while the **Classical Theory** holds that the supply of saving and demand for investment determine the equilibrium level of the rate of interest, the **Loanable Funds Theory** argues that it is the supply of and demand for loanable funds which determine the equilibrium rate of interest. The **Keynesian Theory** explains the phenomenon under discussion in terms of supply of and demand for money. On the whole, it can be stated that the equilibrium in financial markets is established when the expected demand for funds (credit) for short- and long-term investments matches with the planned supply of funds generated out of saving and credit creation. In other words, the equality of the total desired borrowing with the total desired lending is necessary for establishing equilibrium rate of interest. Figure 1.2 depicts the financial markets' equilibrium.

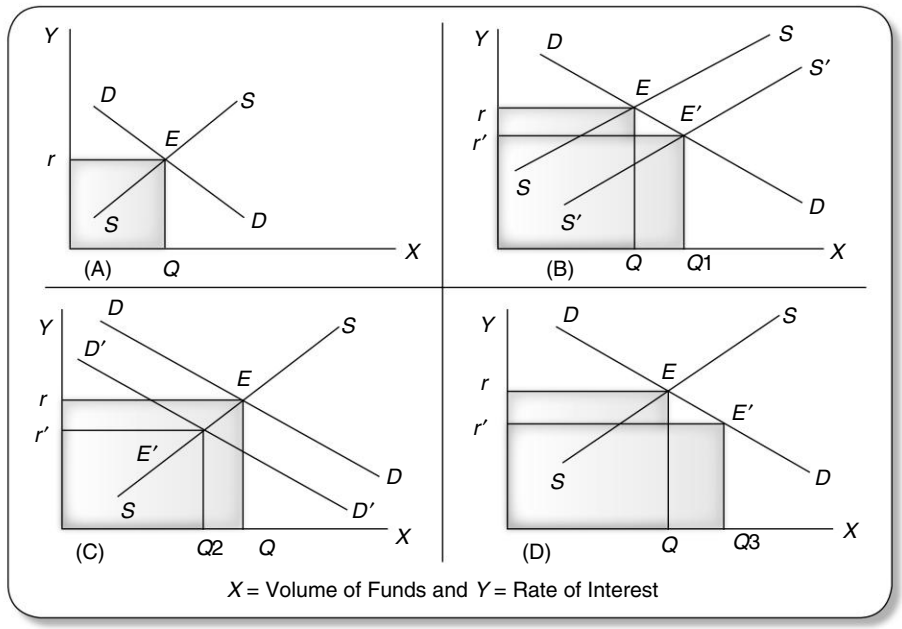

Figure 1.2 **Equilibrium in the financial markets.**

In panel (A) of Figure 1.2, the (*SS*) curve shows the aggregate supply of funds and the (*DD*) curve shows the aggregate demand for funds. Their intersection point *E* reflects the equilibrium position at which the *Q* amount of funds will be supplied and demanded at the equilibrium rate of interest, *r*. It is to be noted that the

supply curve slopes upwards from left to right, which means that as the rate of interest increases (decreases), more (less) funds would be made available in the financial system. On the other hand, the demand curve slopes downwards from left to right, which means that as the rate of interest increases, the demand for finance would decline.

The shifts in either the supply curve or the demand curve or both of them would result in changes in the market equilibrium. Panels (B) and (C) in Figure 1.2 show the effect of the shift in the supply curve and the demand curve, respectively. In panel (B), when the supply curve (SS) shifts to the right ($S'S'$), that is, when the supply of funds increases, other things (demand) remain the same, the equilibrium rate of interest declines from r to r'. The similar result is seen in panel (C), when the demand curve (DD) shifts to the left ($D'D'$), that is, when the demand for funds declines, but other things (supply) remain the same, the rate of interest declines.

1.4.1 Determinants of Supply and Demand for Funds

The question of determinants of supply and demand for funds has been dealt with in theoretical and empirical studies that mention a variety of factors, and emphasise them differently. One of the major determinants of supply of funds is the aggregate savings by the household sector, business sector and the government sector in a given economy. The saving of the economic unit is equal to the difference between its disposable income and the consumption expenditure in a given year. A variety of factors have a bearing on the volume of savings in the economy. The level of current and expected income, cyclical changes in income, agewise variations in income, distribution of income in the economy, degree of certainty of income, wealth, inflation, desire to provide for old age, family members, contingencies, thrift, rate of interest and availability of savings media with preferred investment characteristics are the relevant factors in this respect. Another major determinant of supply of funds is the development of banks and other financial institutions which, in turn, determine the credit multiplier.

The demand for funds depend upon (A) investment in fixed and circulating (working) capital, (B) demand for consumer durables and (C) investment in housing. The total investment demand, in turn, is determined by (i) the current level of capital stock, (ii) capacity utilisation, (iii) the desired capital stock, which is influenced by business expectations (prospects) regarding future demand for goods (sales), prices, government policies and profitability, (iv) availability of internal funds, (v) cost of funds, and (vi) technological changes. The demand for consumer durables depends upon (a) changes in tastes and preferences, (b) fashion, (c) demonstration effect, and (d) cost of funds.

It has to be borne in mind that the equilibrium refers to ideal conditions in financial markets. However, in reality, the situation in financial markets in different countries differs from ideal conditions in varying degrees. The financial markets are characterised by many imperfections, restrictive practices and externalities. We witness the existence of transactions costs, lack of information, limited number of operators, direct and indirect intervention by the authorities and so on. It is often found that the authorities determine the volume of supply of funds, allocation of funds and the cost of funds administratively through direct physical regulations and controls. Therefore, the interest rate in practice differs, often quite substantially, from the rate of interest determined theoretically under ideal conditions. Consequently, the financial markets tend to experience either the excess demand for or excess supply of funds, continuously. Panel (D) in Figure 1.2 gives an idea about such a phenomenon. When the rate of interest is administratively fixed at the level r', which is lower than

the free market equilibrium rate of interest, it results in the excess demand for funds and the reduction in the supply of funds. In such a situation, the authorities try to match the supply of and demand for funds by resorting to direct allocation of credit or by credit rationing.

1.5 FINANCIAL SYSTEM AND ECONOMIC DEVELOPMENT

LO 3

Identify the role of the financial system in economic development

The role of the financial system in economic development has been a much discussed topic amongst economists. Is it possible to influence the level of national income, employment, standard of living and social welfare through variations in the supply of finance? In what way financial development itself is affected by economic development?

There is no unanimity of views on such questions. A recent literature survey concluded that the existing theory on this subject has not given any generally accepted model to describe the relationship between finance and economic development.[4] The importance of finance in development depends upon the desired nature of development. In the environment-friendly, appropriate-technology-based, decentralised alternative development model, finance is not a factor of crucial or critical importance. But even in a conventional model of modern industrialism, the perceptions in this regard vary a great deal. One view holds that finance is not important at all. The opposite view considers it to be very important. The third school takes a cautionary view. It may be pointed out that there is a considerable weight of thinking and evidence in favour of the third view also. Let us briefly explain these viewpoints one by one.

In his model of economic growth, Solow has argued that growth results predominantly not from the increase in labour and capital but from the technical progress, which is exogenous. Therefore, money and finance and the policies about them cannot contribute to the growth process.

1.5.1 Effects of Financial System on Saving and Investment

The production function is the link between finance and economic development. It has been argued that men, materials and money are crucial inputs in production activities. The human capital and physical capital can be bought and developed with money. In a sense, therefore, money, credit and finance are the life-blood of the economic system. Given the real resources and suitable attitudes, a well-developed financial system can contribute significantly to the acceleration of economic development through three routes. *First*, technical progress is endogenous; human and physical capital are its important sources; and the increase in them require higher saving and investment, which the financial system helps to achieve. *Second*, the financial system contributes to the growth not only via technical progress but also in its own right. The economic development greatly depends on the rate of capital formation. The relationship between capital and output is strong, direct and monotonic (the position which is sometimes referred to as 'capital fundamentalism'). Now, the capital formation depends on whether finance is made available in time, in adequate quantity and on favourable terms—all of which a good financial system could achieve. *Third*, it also enlarges the markets over space and time; it enhances the efficiency of the function of medium of exchange and thereby helps in economic development.

[4]Hermes Niles, "Financial Development and Economic Growth: A Survey of the Literature", *International Journal of Development Banking*, January 1994.

1.5.2 Theories of the Impact of Financial Development on Savings and Investment

The importance of finance and financial system in the economic development can be understood better if we study various theories of the impact of financial development on savings and investment. The following theories are relevant in this context: (a) The Classical Prior Voluntary Saving Theory, (b) Credit Creation Theory, (c) Forced Saving or Inflationary Financing Theory, (d) Financial Repression Theory, and (e) Financial Liberalisation Theory.

Prior Savings Theory

The Prior Savings Theory (PST) regards saving as a prerequisite or a determinant of investment, and it holds that all savings in the economy can find investment outlets. It stresses the need for appropriate monetary policy and fiscal policy for promoting and mobilising savings voluntarily for investment and growth. It is believed that since investment is an alternative to consumption, any investment which is not financed by prior savings will generate inflation and not real income or development. This theory does not subscribe to the view that inflation is needed for growth; it is averse to inflation, it advocates control of inflation, and suggests a policy of reasonably high positive real interest rates to encourage savings by the public. PST believes in the neutrality of money in the growth process.

Now, the financial system has both the scale and structural effect on saving and investment. It increases the rate of growth (volume) of saving and investment, and makes their composition, allocation and utilisation more optimal and efficient. It activises saving or reduces idle saving; it also reduces unfructified investment and the cost of transferring saving to investment. How is this achieved? In any economy, in a given period of time, there are some people whose current expenditures are less than their current incomes, while there are others whose current expenditures exceed their current incomes. In a well-known terminology, the former are called the ultimate savers or surplus spending units, and the latter are called the ultimate investors or the deficit spending units.

Modern economies are characterised by the (a) ever-expanding nature of business organisations such as joint-stock companies or corporations, (b) ever-increasing scale of production, (c) separation of savers and investors, and (d) differences in the attitudes of savers (cautious, conservative and usually averse to taking risks) and investors (dynamic and risk takers). In these conditions of what Samuelson calls the dichotomy of saving and investment, it is necessary to connect the savers with the investors. Otherwise, the savings would be wasted (hoarded) for want of investment opportunities, and investment plans will have to be abandoned for want of savings. The function of a financial system is to establish a bridge between the savers and investors and thereby help the mobilisation of savings, and thus enable the fructification of investment ideas into realities. Figure 1.3 reflects such a role of the financial system in the economic development.

A financial system helps output to increase by moving the economic system towards the existing production possibility frontier (PPF) or by moving (shifting) the PPF of the economy rightwards. This is done by transforming a given total amount of wealth into more productive forms. It induces people to hold less of saving in the form of precious metals, real estate land, consumer durables and currency, and to replace these assets by bonds, shares, units and so on. It also directly helps to increase the volume and rate of saving by supplying diversified portfolio of such financial instruments, and by offering inducements and choices which are in keeping with the array of savers' preferences. The growth of 'banking habit' helps to activise saving

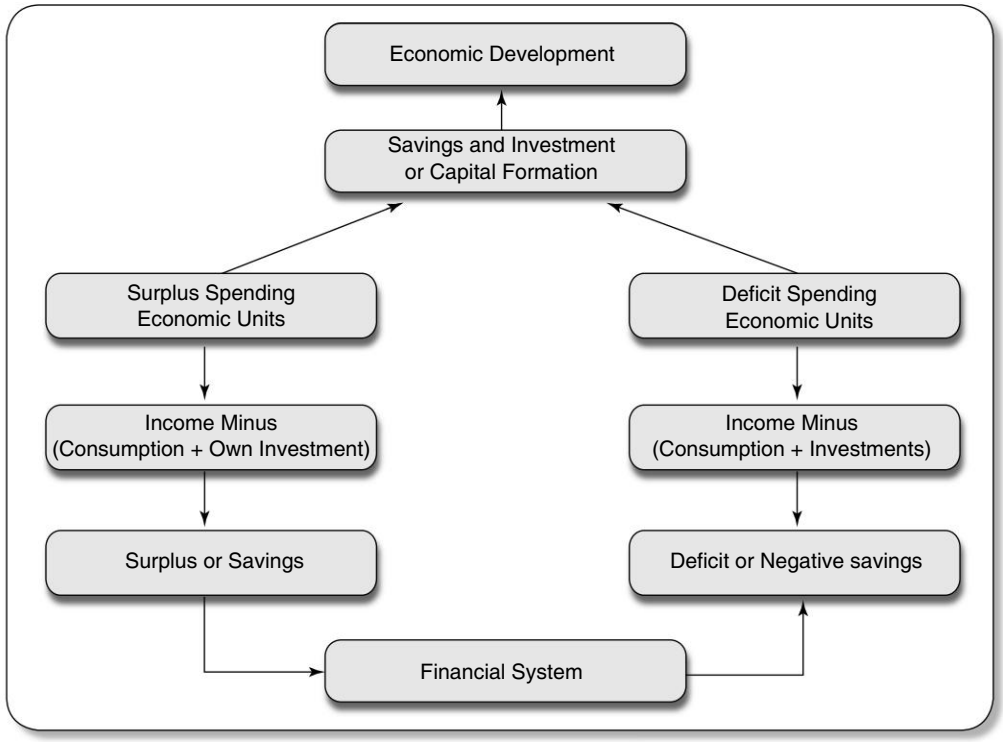

Figure 1.3 **Relationship between financial system and economic development.**

and undertake fresh saving. The saving is said to be 'institution-elastic', that is, easy access, nearness, better return and other favourable features offered by a well-developed financial system leading to increased saving.

A financial system helps to increase the volume of investment also. It becomes possible for the deficit spending units to undertake more investment because it would enable them to command more capital. As Schumpeter has said, without the transfer of purchasing power to him, an entrepreneur cannot become the entrepreneur.[5] Further, it encourages investment activity by reducing the cost of finance and risk. This is done by providing insurance services and hedging opportunities, and by making financial services such as remittance, discounting, acceptance and guarantees available. Finally, it not only encourages greater investment, but also raises the level of resource allocation efficiency amongst different investment channels. It helps to sort out and rank investment projects by sponsoring, encouraging and selective supporting of business units or borrowers through more systematic and expert project appraisal, feasibility studies, monitoring and generally keeping a watch over the execution and management of projects.

The financial intermediaries achieve economies of scale in the cost of transferring savings to the investors through pooling of default risk and reducing transactions costs. The economies of scale in borrowing and lending, and the access to superior technology are the sources of their advantage with respect to transactions cost. Financial institutions also help development by creating a more efficient payment, transfer and remittance mechanism. They help the public in effecting and facilitating transactions swiftly and safely on a continuous basis. They generate confidence amongst the buyers and sellers that the instruments used in making payments

[5]Schumpeter, J.A., *The Theory of Economic Development*, Oxford University Press, London, 1934, p. 102 (emphasis added).

with respect to transactions will be accepted and honoured by all the participants in the system. Similarly, the financial institutions help to reduce one or more parts of information costs. These parts are as follows:

- The search cost for searching investment opportunities.
- Verification cost incurred for assessing the viability of identified investment opportunities.
- Monitoring cost incurred for supervising investments making sure that funds supplied are used for the stated purpose.
- Enforcement cost incurred to make borrowers to fulfil repayment obligations.

To put it differently, financial institutions promote development by offering the following 'transformation services or functions':

- *'Liability–Asset Transformation':* They issue claims (viz. deposits) to the customers that have characteristics different from those of their own assets, which, in turn, meet the requirements of a different set of their customers (viz. corporates).
- *'Size Transformation':* Financial institutions choose and manage portfolios whose risk and return they favourably alter by applying resources to acquire better information and to reduce transaction costs. As said above, they are able to do so through economies of scale in lending and borrowing. They provide large volumes of finance by pooling small deposits or unit capital.
- *'Risk Transformation':* Financial intermediaries pool, distribute, reduce and manage risk better through greater diversification of the portfolio which is not possible for any single, particularly, small saver.
- *'Maturity Transformation':* Financial institutions offer savers alternate forms of deposits according to their liquidity, risk and return preferences, and provide borrowers with loans of (long-term) maturities required by them. The commercial banks borrow short and, on an average, lend long, and, in the process, they change the length of debt in such a way that reconciles the liquidity preference of the ultimate funds—providers and ultimate funds users. In doing so, they stimulate the productive investment by persuading savers to switch from unproductive investment in tangible assets to productive investment in firms.

In the modern economy with positive information, transactions and monitoring costs, if the banks are not present, the savers would allocate their savings between capital assets and currency in order to maximise the utility depending on their risk aversion. With the presence of banks, the individuals can hold deposits with them, and banks, by exploiting the law of large numbers, can minimise risk and uncertainty, which leads to resource misallocation by individual savers and investors. The financial intermediaries try to see to it that the capital is generally not wasted, which helps to raise the capital–labour ratio and the rate of economic growth. In a nutshell, the financial system facilitates allocation of resources across space and time in an uncertain environment. This primary function can be broken into the following proximate functions. Financial system (a) facilitates separating, distributing, trading, hedging, diversifying, pooling and reducing risks, (b) allocates resources, (c) monitors managers and exerts corporate control, (d) mobilises savings, (e) facilitates exchange of goods and services, that is, facilitates efficient operation of the payment mechanism, (f) enables economic units to exercise their time preference, (g) transmutes or transforms financial claims so as to suit the preferences of both savers and investors, (h) enhances liquidity of financial claims through securities trading, and (i) facilitates better portfolio management.[6]

[6]For further and detailed discussion of these services, see Robinson, R.I. and Wrightsman, D., Financial Markets, McGraw-Hill, London, 1981, Chapter 1; Edmister, R.O., *Financial Institutions*, McGraw-Hill, New York, 1986, Chapter 1.

Credit Creation Theory

According to the Credit Creation Theory, the contribution of a financial system to growth goes beyond increasing prior-saving-based investment. There are two strands of thought in this regard. According to the first one, emphasised by Kalecki and Schumpeter, the financial system plays a positive and catalytic role by providing finance or credit through creation of credit in anticipation of savings. This, to a certain extent, ensures the independence of investment from saving in a given period of time. The investment financed through created credit generates the appropriate level of income which, in turn, leads to an amount of savings which are equal to the investment already undertaken. The First Five Year Plan in India echoed this view when it stated that the judicious credit creation in production and availability of genuine savings has also a part to play in the process of economic development. It is assumed here that the investment out of created credit results in a prompt income generation, otherwise, there will be sustained inflation rather than sustained growth.

Theory of Forced Savings

The Theory of Forced Savings or Inflationary Financing stresses on increasing investment not with prior savings, or not without prior savings, but with forced savings. This theory is credited mainly to Keynes and Tobin. According to them, investment is not determined by savings, it is savings which are determined by investment which can be increased autonomously through monetary expansion. The monetary expansion speed up development through four channels: *First*, if the resources are unemployed, it would increase aggregate demand, output and savings. *Second*, if the resources are fully employed, it will generate inflation which will lower the real rate of return on financial investments or money, which will make real balances less attractive to hold, which will induce the wealth holders to invest more in physical capital. The resulting increase in capital intensity would increase output and savings. This is known as **Tobin or Portfolio Shift Effect** of monetary expansion. *Third*, inflation changes income distribution in favour of profit earners, which would lead to increase in savings. This is known as **Income Distribution Effect**. Fourth, inflation imposes tax on real money balances and thereby transfers resources to the government for financing investment. This is known as **Inflation Tax Effect**. Inflation tax on money holdings consists of the reduction in the real purchasing power of money and the real resources that the holders must forgo to restore the real value of their money holdings. Inflation as a tax on money redistributes resources from the private sector to the government as the issuer of money. The policy implication of the Keynes–Tobin approach is that since investment and not saving is the constraint on growth, a low or negative real interest rate is necessary for encouraging private investment.

The critics have pointed out that the policy of financing growth through inflation suffers from certain limitations and dangers: (i) The concept of forced saving present inflation as a desirable phenomenon, while in real life, people fear inflation. (ii) The alleged beneficial effects of inflation can be reaped only if inflation is unanticipated, while in real life, the public anticipate inflation to a significant extent. (iii) Inflation can induce undesirable pattern of investment. It may cause 'portfolio shift' not only from financial to real assets but also from productive real assets to speculative real assets. (iv) Inflation means greater economic instability and, therefore, greater uncertainty and risk which can discourage investment activity. (v) Under cost-push inflation, 'income redistribution effect' of inflation on savings would be weakened. (vi) Inflation may result in the reduction of exports, lower foreign exchange availability, adverse balance of payments and lower growth. (vii) Inflation may increase forced savings but it may discourage voluntary savings because it could change

the 'time preference' in favour of current consumption. The extent of contribution of the financial sector to saving, investment and growth is said to depend on its being free or regulated (repressed). Since at present this subject is a focus of widespread attention all over the world, it is necessary that we familiarise ourselves with the main thinking of the two schools of thought, namely, the believers in financial regulation, and those who believe in financial liberalisation or deregulation.

Classicals *versus* Keynesians

It may be explained here that the central point of difference between Classical and Keynesian approaches in this context is with regard to the role of money and inflation in the process of development. While the former denies any role to money and inflation, that is, it believes in the neutrality of money, the latter believes in the non-neutrality of money. It would be more accurate to say that while the Classicals believed in the neutrality of money in both the short run and the long run, the Keynesians may accept that money is neutral in the long run, but they hold that money is not neutral in the short run. The monetarist position on this point is similar to the Keynesian position. They accept that in the short run (3–10 years), money has an effect on the real economy, but over the decades money affects primarily the prices. The neutrality of money means that the volume of money has no effect on the real economy or real variables, that money does not play a role in the determination of relative prices, employment, real interest rates, capital intensity and output. Incidentally, the Quantity Theory of Money is the most important and widely known expression of the neutrality of money. It may be noted that the Keynesians and Monetarists offer different explanations for their belief in the short-run non-neutrality of money. While the Keynesians invoke the concept of money illusion to account for their belief, the Monetarists ascribe it to expectational errors or imperfect information.

Financial Regulation Theory

The authors like Stiglitz have been in the forefront to present a case for financial regulation, and to question the unlimited financial liberalisation. It has been argued by them that financial markets are prone to market failures, and there are certain forms of government intervention that will make them function better. The lowering of interest rates through government intervention improves the average quality of the pool of loan applications, and improves the efficiency with which capital is allocated. Direct credit programmes can encourage lending to sectors which are usually shunned by the market. In the economies where the markets are underdeveloped and imperfect, unfettered competition does not ensure Pareto-optimum or Pareto-efficient resource allocation. The payments system and public confidence in the integrity of financial system are public goods and the government intervention provides that public good. The unfettered competition amongst the financial intermediaries cannot achieve and protect the social benefits of a stable payments system, it tends to increase the probability of bank failure and the breakdown of the payments mechanism. It has been further argued that the long-term relationship between the borrowers and lenders is of great value, importance and use, but it does not develop in a competitive environment because of 'time inconsistency' problem which means that *ex ante* a long-term relationship is desirable, but, *ex post*, the borrowers or lenders have the incentive to change their mind.

Recently, a case for government intervention has been put forth for the purpose of developing local financial institutions and promoting regional development. Since this is a highly important and relevant issue for

India, let us study the argument at length.[7] Conventionally, it is assumed that within any national economy, there is a perfect capital mobility, and interest rates across regions are equalised by interregional arbitrage. In practice, on account of asymmetric information and other market imperfections capital does not flow freely across various regions. The local institutions and investors have incentives to invest locally, and investment opportunities not used by local investors may tend to be adversely selected. The local financial institutions cannot raise much funds in the national market. The informational imperfections sustain differing rates of return on capital across regions, and lead to sub-optimal allocation of capital and other resources. This creates a scope for financial market intervention to positively affect regional development by correcting original maldistribution of capital. One way the policy can help here is by increasing the direct central and state government investments in local economies. Alternatively, the authorities can support local financial institutions, which, based on their superior local information, would then lend to the firms.

Financial Liberalisation Theory

Let us now turn to the discussion of important arguments and views of the proponents of financial liberalisation for promoting financial and economic development. McKinnon and Shaw have argued that the developing countries are characterised by the government intervention and interference in the financial system. These countries suffer from poor performance with respect to saving, investment and growth due to financial control, regulation and repression by authorities. The indicators of financial repression are: (a) the existence of indiscriminate distortions in financial prices such as interest rates and exchange rates, (b) imposition of interest rates ceiling or fixing nominal interest rates administratively resulting in low or negative real interest rates, (c) prescribing high reserve ratios, (d) instituting directed credit programmes, and (e) inefficient quantitative (non-price) credit (loanable funds) rationing.

Financial repression results not only in the lower volume of investment, but also in lower quality of investment because banks and financial institutions ration available funds or allocate credit not in the light of expected marginal productivity of investment but by using their discretion or in the light of transactions costs, perceived default risk, quality of collateral, political pressures, loan size and covert benefits to loan officers. Directed credit programmes force financial institutions to increase their risk exposure with no compensating increase in returns, which raise delinquency and default rates, and which contributes to increasing the fragility of the financial system. Interest rates ceilings and low/negative real interest rates distort the economy in a large number of ways: (1) They produce bias towards current consumption or indulgence reducing savings below socially optimum level. (2) They induce saver to hold their savings in non-productive real assets. (3) They make potential lenders to prefer relatively low-yield direct investment. (4) They induce borrowers to choose relatively more capital-intensive projects, resulting in capital-intensive industrial structure inconsistent with the factor endowment of countries. (5) They result in financing projects which are low yielding and inefficient. (6) They deter banks and FIs from incurring necessary expenses for loan assessment, which results in the selection and financing of low-quality, high-risk projects. In other words, they misallocate resources and give rise to inefficient investment profile. (7) They make people rent-seekers.

It has been argued that the elimination of financial repression through financial liberalisation, deregulation and privatisation is essential to eliminate all these ill-effects and distortions, and to put developing economies on high saving, high investment and high growth path. Financial liberalisation would result in (a) increase in

[7]Greenwald, B.C., and others. "Capital Market Imperfections and Regional Economic Development", in Giovannini, A. (ed.), *Finance and Development: Issues and Experience*, Cambridge University Press, 1993.

interest rates on a variety of financial assets as they would adjust to their competitive free-market equilibrium level, (b) increase in saving, reduction in the holding of real assets and increase in financial deepening, (c) expansion in the supply of real credit, (d) increase in investment, (e) increase in average productivity of investment, and (f) increase in allocative efficiency of investment. The real rate of interest as the return to savers is the key to higher level of investment, and it, as a rationing device, is a key to greater efficiency of investment. The developing countries have investment opportunities but they do not have adequate savings, and, therefore, they need to raise interest rates in their economies.

In short, the financial repression reduces the real size of the financial system, it inhibits financial deepening and financial development and economic development, while financial liberalisation accelerate financial and economic development.

Financial Regulations versus Liberalisation

Now, substantial empirical evidence on the working of financial regulation versus liberalisation for more than 30 years in a large number of countries across five continents is now available to enable us to form a more informed and balanced judgement regarding the choice of regulated versus liberalised financial system. Much of this evidence suggests that over-enthusiasm and over-optimism need to be avoided in respect of both regulation and deregulation. The IMF–World Bank (WB)-guided (imposed?) liberalisation deregulation policies have significantly increased volatility, instability, contagion and vulnerability in the financial system. They have in many cases been accompanied by the collapse of banks, other financial institutions, national currencies and so on. As a result, the approach of economists, financial experts, authorities, IMF and WB has now become far more cautious. It is now widely admitted that while private ownership results into financial crises, and public ownership and policy often helps to rescue the financial markets out of crises. At the same time, the publicly owned financial system is also not free from crises and collapses. The massive misallocation of capital by the Savings and Loan Associations, and by banks in the aftermath of partial deregulation of the early 1980s in the United States suggest that 'free' or 'competitive' markets do not necessarily allocate resources more efficiently.

The lessons from the liberalisation in Eastern Europe, Central Asia, Soviet Union and Southeast Asia have not been encouraging. As per one assessment, the liberalisation experiment has not proceeded the way many economists had predicted. The post-liberalisation period has been a difficult period for most of the countries. There have been many bitter and disappointing deregulation failures. During a decade of reforms (1986–1996), Russian GDP declined by almost half; Russia has not only stagnated, it has doubled its level of inequality. Russia succeeded in privatising much of its industry and natural resources, but the level of fixed investment declined dramatically. The promise of quick economic transformation based on privatisation has proven illusory. The alternative is to adopt the strategy of decentralisation which will push economic decision making down to the level at which the stakeholders would have a better chance to protect their own interests.[8]

It has been observed that the liberalisation–globalisation process has exposed nations to enormous shocks. Growth requires financial institutions that lend to domestic firms. The policy of selling banks to foreign owners has impeded growth and stability. The contractionary policies under liberalisation have forced many countries into deep recession. Faced with substantial adverse evidence, the partisans of financial liberalisation have argued that it has failed because of (a) the existence of implicit or explicit deposit insurance, (b) inadequate banking supervision, (c) macroeconomic instability, and (d) excessive risk taking by banks.

[8]Stiglitz, J.E., "Whither Reforms? Ten Years of Transition", *Annual World Bank Conference on Development Economics*, 1999, p. 17.

They have suggested the following prerequisites or preconditions for the success of liberalisation: (i) Adequate banking supervision and prudential regulation should be introduced so that banks have a well-diversified loan portfolio, and which provide at least minimum accounting and legal infrastructure. (ii) Macroeconomic and price stability should be achieved. (iii) Fiscal discipline and restraint should become a reality. (iv) The government should not impose discriminatory taxes on financial intermediation. (v) The banks should pursue competitive and profit-maximising policy.

The newly emerging cautious approach to liberalisation is well reflected in the following viewpoint of the WB: Good regulation of financial firms is essential. The policy makers should align private incentives with public interest in such a way that the scrutiny of financial institutions by official supervisors is buttressed by supervision by market participants. Although there is much for the government to do, there are other areas where the public sector has little comparative advantage.[9] The shift towards accepting the mix of regulation-deregulation is reflected in the newly coined and used concepts such as 'market-aware regulation', 'prudential regulation', 'enabling regulation', 'incentive-compatible regulation' and 'right-type regulation'. While Stiglitz has suggested decentralisation as the alternative to regulation or liberalisation, the WB has suggested the following policy as the appropriate policy for the future.[10]

We need to have a right type of regulation which has the following features: (a) It is 'incentive-compatible', that is, it is designed in such a way that it ensures the creation of incentives for market participants which help it to achieve its goals. (b) It works with the market but does not leave things to the market, it is a 'market-aware' regulation. (c) It keeps authorities at arm's length from transactions, lessening the opportunities for conflicts of interests and corruption. (d) It removes distortions that lead to too little direct investment, too little long-term finance, too little equity finance and too little lending to small firms and the poor.

1.6 MEANING AND PROCESS OF FINANCIAL DEVELOPMENT

The role of financial development in economic development has been discussed so far without clarifying the meaning, measures (indicators) and process of financial development.

LO 4
Explain the meaning and process of financial development

1.6.1 Indicators of Financial Development

What constitutes financial development is generally discussed by pointing out the differences in the financial structures of the developed and developing countries. Based on this approach, different researchers have used one or more of the following measures or indicators to denote the extent, stage and degree of financial development:

- Finance Ratio (FR), that is, the ratio of total issues of primary and secondary claims to national income.
- Financial Interrelation Ratio (FIR), that is, the ratio of financial assets to physical assets in the economy.
- New Issue Ratio (NIR), that is, the ratio of primary issues to the physical capital formation which indicates how far investment has been financed by direct issues to the savers by the investing sectors.

[9]World Bank, *Finance For Growth: Policy Choices In A Volatile World*, Oxford University Press, New York, 2001, p. 10.
[10]World Bank, *op. cit*., pp. 23–24.

- Intermediation Ratio (IR), that is, the ratio of secondary issues to primary issues, which indicates the extent of development of financial institutions as mobilisers of funds relative to real sectors as direct mobilisers of funds. It indicates institutionalisation of the financial activity in the economy.
- The ratio of money to national income; the higher this ratio, the greater the financial development, because it indicates the extent of monetisation and the size of exchange economy in the country.
- The proportion of current account deficit which is financed by market-related flows; the higher this ratio, the greater the financial development, while the reliance on official economic assistance for financing such deficit denotes financial underdevelopment.
- Developed financial sector is fully integrated (is not segmented) domestically as well as internationally. In such a system, the risk-adjusted rate of return on any one investment would not differ significantly from the rate of return on any of the other investments. Similarly, the rate of return to any one saver would not differ significantly from returns to all other savers. Further, the rate of return to savers as a group would not differ significantly from the return to investors as a group. Finally, the rate of return on domestic investments would not differ significantly from returns on comparable foreign investments.
- The lower the transaction cost and information cost, the higher the financial development.
- In a developed financial system, private banking and non-public sector banking is predominant, there is little government intervention in credit allocation and concentration of banking is absent.
- In a well-developed financial sector, there is a strong and effective system of supervision, inspection, auditing and regulation, and regular collection of prudential information; and financial organisations conform to international standards with regard to capital adequacy, non-performing loans and so on.
- A developed financial structure is characterised by the presence of strong, active, large-sized non-bank financial sector comprising stock market, debt market, insurance companies, pension funds, mutual funds and so on.
- The greater the financial development, the greater the openness of the economy reflected in a high level of current and capital account openness/convertibility, minimum restrictions on foreign ownership of assets and repatriation of earnings and the absence of parallel foreign exchange market.
- The functioning of the developed financial markets is characterised by the effective and quick enforcement of financial contracts, recovery of loans and property rights.
- The well-developed secondary markets in all financial securities are essential for calling a financial system a developed system.
- In a developed financial system, indirect rather than direct techniques of monetary policy are used in a more frequent manner, and the interest rates are freely determined by the markets.

Patterns of Relationships between Financial and Economic Development

How does financial development occur? Is it influenced by economic development? Does the former always precede the latter? Some authors have argued that there are three possible patterns of relationship between economic development and financial development.

- First, the economic progress induces an expansion of the financial system; as the per capita income in the country increases, investor demand for diversified financial assets increases. At low levels of income, there is lack of demand for varied financial services. As the real economy grows, there is more and more demand for such services, which is met by the financial system rather passively. This has been designated as 'demand-following' financial development or a 'passive' financial development in the literature.

- Second, the financial development precedes economic development, and it is brought about through a conscious, deliberate policy by the authorities. Newer and more financial institutions are established and promoted, newer and newer financial instruments and services are introduced by the authorities and this helps to accelerate the rate of real growth. This has been designated as 'supply leading' financial development.
- Third, the direction of causality between economic development and financial development does not remain the same in all stages of development. In the beginning of development process, the financial development may be undertaken or promoted by the authorities, which may induce innovations, capital formation and growth, but as the growth proceeds, this 'supply-leading' financial development may be reinforced by 'demand-following' development. It is difficult to establish precisely the sequence of economic development and financial development; it is difficult to disentangle their cause and effect relationship; while the financial system accelerates growth, it itself grows with economic advancement. Therefore, it is more realistic and accurate to say that the relationship between economic development and financial development is symbiotic, mutually reinforcing and intertwined. In the words of Schumpeter, 'the money market is always ... the headquarters of the capitalist system, from which orders go out to its individual divisions, and that which is debated and decided there is always in essence the settlement of plans for further development. All kinds of credit requirements come to this market; all kinds of economic project are first brought into relation with each other and contend for their realisation in it; all kinds of purchasing power flows to it to be sold. This gives rise to a number of arbitrage operations and intermediate manoeuvres which may easily veil the fundamental thing… Thus, the main function of the money or capital market is trading in credit for the purpose of financial development. Development creates and nourishes this market. In the course of development, it becomes the market for sources of income themselves'.[11]

Financial Development and Economic Growth

The theoretical literature has documented that the financial development creates enabling conditions for economic growth. Based upon this idea, we empirically examine the relationship between economic growth and financial development in the context of India, particularly in the post-reform period, i.e. 1991–2016. The economic growth (EG) is approximated by the real GDP per capita growth (at constant prices) and we have used financial development (FD) indicator from International Financial Statistics of IMF as a proxy for FD.Taking the possible endogenous relationship between EG and FD into account, we employ a Granger causality model, which is specified as follows:

$$X_t = a_1 + \sum_{i=1}^{m} a_{1i} \times X_{t-i} + \sum_{i=1}^{m} b_{1i} \times Y_{t-i}$$

$$Y_t = a_2 + \sum_{i=1}^{m} b_{2i} \times Y_{t-i} + \sum_{i=1}^{m} a_{2i} \times X_{t-i}$$

where X represents the economic growth (EG) and Y represents the financial development (FD); a_{1i} and a_{2i} are the coefficients of lagged value of X_t. Similarly, b_{1i} and b_{2i} are the coefficients of lagged value of Y_t. The number of lags, m, is chosen on the basis of Akaike information criterion (AIC) and Schwarz Bayesian information criterion (SBIC).

[11] *op. cit.*, pp. 126–127.

Table 1.1 Granger-Causality Test between EG and FD

Null Hypothesis	*F- Statistics*	*Probability Value*
FD does nor Granger-cause EG	3.256*	0.001
EG does nor Granger-cause FD	2.924*	0.015

Note: * Significant at 1% level

Table 1.1 reports the Granger-causality test of FD and EG. Our results find a bi-directional causality between EG and FD. This implies that the development of financial sectors enhances the economic growth to a larger extent. This could be through the effective mobilisation of savings and efficient allocation of capital. Simultaneously, the rapid growing of economy facilitates adequate infrastructure to build a vibrant financial market, which creates a transparent trading platform for financial securities that not only reduces the transaction and information costs but also enable investors to diversify their risk of holding assets. For this analysis, we can infer a strong inter-relationship between the growth of an economy and the development of its financial markets.

1.7 FINANCIAL SECTOR AND ECONOMIC DEVELOPMENT: A CAUTIONARY APPROACH

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Understand a cautionary view of the role of the financial system in development

Thus, based on theory and empirical evidence, there is a widespread belief that economic growth, poverty reduction and stability depend upon an effective and efficient financial system. It is said that there is a first-order relationship between financial development and economic growth. It has been argued that the financial development has a strong and independent role in increasing the general and long-term prosperity. The fight against poverty tends to be successful in countries which have prosperous banking and securities markets. Improvements in financial arrangements and effectively functioning financial system precede and cause good economic performance, improve living standards of the poor and insulate the economy from macroeconomic fluctuations. The WB believes that the contribution of finance to the long-term growth is achieved chiefly by improving the economy's total factor productivity rather than by raising the rate of capital accumulation. Schumpeter, for example, had believed that the services such as mobilising savings, evaluating projects, managing risk, monitoring managers and facilitating transactions are essential for technological innovation and economic development. The eclectic view in this context has been that the financial system affects growth through the channels of increasing (a) the rate of capital accumulation, (b) the rate of technological development, and (c) productivity.

1.7.1 Cautionary View of Financial System in Development—Reasons

Many economists have taken a cautionary view of the role of financial system in development. The capital market enthusiasm and optimism implicit in certain theories of finance, viz., Capital Asset Pricing Model, and Efficient Market Hypothesis with their multiple unrealistic, restrictive assumptions, have been questioned in different ways.

First, it has been argued that the financial sector can perform the developmental role if it functions efficiently, but in practice it is not efficient. Tobin's analysis on this point is highly instructive. With logic, examples and evidence he has explained many limitations, problems and inefficiencies with which the working of financial system is riddled with. Let us note Tobin's position at length.[12]

It is very doubtful whether financial markets are actually characterised by 'random walk'. The insider information is rampantly used to make extraordinary gains. The share markets are hardly characterised by fundamental valuation efficiency; they gyrate upwards and downwards which cannot be justified by changes in expected future earnings and economic fundamentals, and by rationally formed expectations. The market speculation multiplies several fold the effect of underlying variability of dividends and earnings. Similarly, bond prices fluctuate much more than the variability of short-term interest rates can justify. Further, foreign exchange rates are excessively volatile relative to fluctuations in trade balances. Takeovers are often motivated by egregious (shocking) undervaluation which is another testimony to the failure of financial markets to offer fundamental valuation efficiency. They are characterised by speculative 'bubbles', that is, by speculation on the speculations of other speculators who are doing the same thing. It is these speculative bubbles which dominate the pricing or valuation of assets in financial markets. As Keynes had emphasised, little investment in financial markets is based on genuine long-term expectations. The financial markets very often fail to provide insurance efficiency, that is, they rarely enable the public to reduce risk and to manage the risk better. They leave the major contingency, namely, inflation, uncovered.

The proliferation of new financial instruments called derivatives has not resulted in increasing the insurance efficiency of the financial markets; they mainly provide greater leverage to short-term speculators. Very little of the volume of market activity of the securities industry has to do with the financing of real investment. The financial markets transfer only a small part of household saving into productive business investment, quite a large part of it goes into real estate, residences, gold and consumer durables. A very large part of the huge amount of cheque payments is for financial transactions; transactions directly connected with the flow of goods and services may amount to no more than a quarter of the total debts.

Financial markets hardly conform to a model of perfect competition; usually, the applicable model is one of oligopoly or monopoly. The financial institutions spend a great deal of money on advertising. Their allocative efficiency actually is very low. While the branches of large nationwide lenders deny credit to small or new entrepreneurs, small-scale industries and agriculture and related activities, they are overeager to lend huge sums to the big corporates. A rather small part of securities transactions relate to the sales of new issues, and a large part of new issues is of the financial business themselves. Of the new issues of non-financial companies, a large share is often accounted for by refunding and restructuring of debt and equity rather than raising funds for new real investment, which, in any case, is financed largely by internal funds.

Therefore, the functioning of the financial system should not generate euphoria and complacency. Financial activities generate high private rewards disproportionate to their social productivity. It would help if it is realised that the nations are wrongly investing more and more of the society's real resources, including the cream of the nation's youth, into financial activities which are by nature remote from the production of goods. The casino effect of the financial markets should not be forgotten. Only 5 percent of the contracts exchanged daily on these markets entail actual deliveries. The speculation on financial markets is a negative-sum game for the general public, while the brokers, dealers and other market operators make billions of rupees on them.

[12]Tobin, James, "On the Efficiency of the Financial System", *Lloyds Banks Review*, 153, 1984.

Thus, financial markets are hardly efficient in practice. Under the conditions of information asymmetry, moral hazard, adverse selection and agency goals, the expectations tend to change quickly leading to swings in assets prices which are exacerbated by the crowd behaviour. Substantial and growing deviations from equilibrium prices are a reality in financial markets which manifest themselves in bubbles or speculative booms and busts. The substantial evidence appears to show that individuals are not really rational in assessing risk; they often tend to attach too much weight to recent experience (i.e. display myopia), and they trade on noise rather than fundamentals.

Second, more recently, through the application of chaos and fractal analyses to financial markets, it has been shown that they are characterised by asymmetry, turbulence, discontinuity, stampedes, non-periodicity and inefficiency.[13] Research done in the 1990s shows that the simple growth models and the models of the role of financial intermediation do not work well. The informational problems are pervasive, and their presence prevents financial markets from fully performing the risk-sharing and income-smoothening functions. The well-functioning financial system can be only one of the elements of a broader array of policies to encourage development.

Third, it has been pointed out that the roles of capital formation and finance in development have been unduly or disproportionately stressed; that the capital shortage is not the single most important barrier to development. Empirically, it has been very often found that the rate of capital formation has increased without raising the growth rate; and the relation between capital and growth has been one of the correlations rather than causation. It is estimated that in industrialised countries, capital accumulation could account for at most one-fourth of the rate of economic growth in the nineteenth and twentieth centuries. Increase in capital without suitable social, economic and political conditions cannot cause growth; and, on the other hand, favourable developments in the conditions just mentioned can achieve much growth with minimum of capital. The conventional thinking has always stressed the need for substitution of capital for other factors; the scope and possibilities for the other way round substitution, particularly in the light of factor endowments, have never been really explored. For growth, much additional capital, and, therefore, much finance, is not always required; through depreciation allowances, better composition of capital, appropriate technology and higher productivity, a lot of growth can be achieved. The methodology used for estimating the financial resource requirements (incremental capital–output ratio) is also riddled with many valuation, measurement and other problems. The thrust and message of the above-given analysis are clearly expressed in the following statements:

1. Real growth cannot be bought with money alone (Chandler).
2. By and large, it seems to be the case that where enterprise leads, finance follows (Joan Robinson).
3. Societies in which other conditions of growth were favourable, were usually capable of devising adequate financial institutions (Habakkuk).
4. The role of finance in development is subsidiary one (Newlyn).
5. Demand side of investment rather than supply of funds may be the decisive element in take-off (Rostow).

[13]Peter, E.E., *Chaos and Order in Capital Markets*, John Wiley, New York, 1991; and *Fractal Market Analysis*, John Wiley, New York, 1994.

1.8 CRITERIA TO EVALUATE FINANCIAL SECTOR

Given the controversy regarding the contribution of financial sector, it is necessary to have criteria, a framework to evaluate the performance of the country's financial sector. Let us first look at the criteria formulated, in the form of questions, by Richard D. Erb, the former deputy managing director of the IMF: (i) Whether institutions find the most productive investments? (ii) Do institutions revalue their assets and liabilities in response to changed circumstances? (iii) Do investors and financial institutions expect to be bailed out of mistakes and at what price? (iv) Whether institutions facilitate the management of risk by making available the means to insure, hedge and diversify risks? (v) Do institutions effectively monitor the performance of their users, and discipline those not making proper and effective use of their resources? (vi) How effective is the legal, regulatory, supervisory and judicial structure? (vii) Whether financial institutions publish consistent and transparent information?[14]

These criteria, useful as they are, do not encompass the social and ethical aspects of finance which ought to be regarded as important as the economic aspects. Therefore, the relevant normative criteria, organising principles and value premises which should guide the functioning of the financial system are as follows: (a) Finance is not a critical factor in development. (b) The use of finance must be imbued with the virtues of austerity, self-limit and minimisation. (c) Financial reforms are not merely a question of 'credit limits', they encompass issues involved in 'limits of credit'. (d) State intervention is not the best way to achieve a fair distribution of credit. (e) Financial institutions must evolve from below rather than imposed from above. Financial development ought to take place at a low and steady pace rather than in spurts and in a programmed or (time) encapsulated manner. (f) There should be a replacement of large scale by small scale, wholesale by retail and class by mass banking. (g) The sufficing principle rather than the maximising one should power the financial system. The functioning of different financial institutions must be on the basis of communitarian spirit and not competition and profit motive. (h) The financing of investment which results in the displacement or retrenchment of labour should be discouraged. (i) The scope for financing various sectors is ultimately constrained by the domestic saving. The substantial increase in the total saving in India is unlikely to take place now. (j) The working of the Indian financial system should not be corporate-sector-centric. (k) There are limits to the overall and industrial growth, and, therefore, a 'ceiling' on the targeted rate of growth has to be imposed. (l) The only legitimate role of the financial markets is their infrastructural role; they should not exist to provide opportunities to make quick, disproportionate pecuniary gains. (m) It is the primary markets' activity supporting new, economically and socially productive real investment, trade and flows of goods and services, which is of primary importance; the enthusiasm for, hyperactivity in and preoccupation with the secondary markets ought to be avoided.

1.9 FINANCIAL DEVELOPMENT: SOME CONCEPTS

In this section, we discuss a few concepts which describe the phenomenon of change and development in a financial system. All these concepts are closely inter-related, and at present they are widely referred to in the discussions on financial markets.

[14]Erb, Richard, D., "Economic Growth and Development: The Roles of a Financial Sector", *Lecture at Rajiv Gandhi Institute for Contemporary Studies*, New Delhi, Undated, pp. 12–22.

1.9.1 Efficiency[15]

The ultimate focus of the efficiency in financial markets is on the non-wastefulness of factor use and the allocation of factors to the most socially productive purposes. The following five concepts are useful in judging the efficiency of a financial system.

Information Arbitrage Efficiency

This is the degree of gain possible by the use of commonly available information. If one can make large gains by using commonly available information, financial markets are said to be inefficient. Thus, the efficiency is inversely related to this type of gain. Under conditions of perfect market, the possibilities of such a gain are nil because the prices in such a market already reflect fully and immediately all relevant and ascertainable available information, and no one would know anything that is not already known and therefore not reflected in market prices.

Fundamental Valuation Efficiency

When the market price of a security is equal to its intrinsic value or investment value, the market is said to be efficient. The intrinsic value of an asset is the present value of the future stream of cash flows associated with the investment in that asset, when the cash flows are discounted at an appropriate rate of discount. This again would happen when markets are perfectly competitive.

Full Insurance Efficiency

This indicates the extent of hedging against possible future contingencies. The greater the possibilities of hedging and reducing risk, the higher is the market efficiency.

Functional or Operational Efficiency

The market which minimises administrative and transactions costs, and which provides maximum convenience (minimum inconvenience) to borrowers and lenders while performing the function of transmission of resources, and yet provides a fair return to financial intermediaries for their services, is said to be operationally or functionally efficient.

Allocational Efficiency

When financial markets channelise resources into those investment projects and other uses where marginal efficiency of capital adjusted for risk differences is the highest, they are said to have achieved allocational efficiency.

1.9.2 Financial Innovations

Financial innovation can be variously defined as (a) the introduction of new financial instrument or service or practice, (b) introducing new uses of funds, (c) finding out new sources of funds, or (d) introducing new process or techniques to handle day-to-day operations, or carrying out a new organisation—all these changes being on the part of existing financial institutions. In addition, the emergence and spectacular growth of new financial institutions and markets is also a part of financial innovation. The word 'new' here means not only the coming into being of what did not exist so far, but also the new way of using the existing

[15]See Tobin James, *op. cit.*

instruments, practices, technology and so on. Similarly, the use or adoption of an already existing financial instrument by financial institution(s) which previously did not do so is also regarded as an innovation. The marked transformation in the roles of financial institutions and the departure from the conventional notions regarding their functions also constitute financial innovation. As per one definition, financial innovations are 'unforecastable improvements' in the array of available financial products and processes.

Financial innovations encompass wide ranging changes in the financial system and they also have wide ranging effects. They lead to the broadening, deepening, diversification, structural transformation, internationalisation and sophistication of the financial system. They result in the financialisation of the economy whereby financial assets to total assets ratio trends to increase. This financialisation may occur with the growth of institutionalisation or intermediation and securitisation simultaneously, or it may occur with the growth of one at the cost of other.[16]

The process of financial innovations has been characterised differently by different authors. They are regarded as responses to the regulatory and tax regimes, financial constraints and so on. The literature suggests the following groups of factors as being responsible for financial innovations: (i) tax asymmetries that can be exploited to produce tax savings, (ii) transaction costs, (iii) agency costs, (iv) opportunities to reduce or reallocate risk, (v) opportunities to increase asset liquidity, (vi) regulatory or legislative change, (vii) level and volatility of interest rates and prices, and (viii) technological advances.[17]

1.9.3 Financial Engineering

This is perhaps the latest terminological addition to the world of finance, which, incidentally, is a new example of invasion of social thinking by technology. After innovations, industrial engineering and social engineering, we now have the financial engineering. It basically means financial innovations; the two terms have often been used interchangeably. The dictionary meaning of innovation and engineering perhaps give a clue to the possible difference between financial innovations and financial engineering. To innovate means to bring about new methods, new ideas or rather to make changes. To engineer means to arrange, contrive or to bring about artfully or skilfully. The financial engineering thus connotes development of new financial technology to cope with financial changes. It involves construction, designing, deconstruction and implementation of innovative financial institutions, processes and instruments. It means the formulation of creative solutions to problems in finance. The development and use of skills, means, techniques, tools for changing and managing the cash flows and investment features of financial instruments form a part of financial engineering. In today's highly volatile markets, it seeks to limit the financial risk by creating financial instruments for hedging, speculation, arbitraging and by fine-tuning portfolio adjustments. It also seeks to maximise profits in a quick manner. The creation of financial derivatives and securitisation are its two examples. The computer power and human insight are combined to spot the arbitrage opportunities, to measure risk and to react to news very fast in financial engineering.

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[16]For implications of financial innovations, see Bhole, L.M., *Impacts of Monetary Policy*, Himalaya Publishing House, Bombay, 1985, pp. 240–62.

[17]Finnerty, J.D., "Financial Engineering in Corporate Finance: An Overview", *Financial Management*, Winter, 1988, p. 16.

1.9.4 Financial Revolution

Some people believe that a veritable financial revolution has taken place in the world of finance in the recent past. The concept of financial revolution is an extension of the concepts of financial innovations and engineering. It is meant to convey that, of late, the magnitude, speed and spread of changes in the financial sector world over have been simply tremendous, prodigious and phenomenal; that it has undergone a 'future shock'. It indicates that the life in the world of finance is no longer easy; that the financial markets now work for 24 hours a day. The innovations in computers and satellite communications, and the linking up of the two have completely changed the production, marketing and delivery of the financial products. And as with every revolution, not all changes have been for the best, and there have been unexpected consequences.

1.9.5 Diversification

In one sense, diversification means the existence or the development of a very wide variety of financial institutions, markets, instruments, services and practices in the financial system. In another but related sense, it refers to the presence of opportunities for investors to purchase a large mix or portfolio of varieties of financial instruments. With the diversified portfolio, investors can minimise the risk for a given rate of return, or they can maximise the return for a given risk.

1.9.6 Disintermediation

It refers to the phenomenon of a decline in the share of financial intermediaries in the aggregate financial assets in the economy because people 'switch out of' their liabilities into direct securities in the open market. Such a flow of funds out of these intermediaries may occur when they are subject to interest rate ceilings while the open market rates of return are rising. The terms securitisation and disintermediation are often used interchangeably. Although these terms are very closely related, one should be careful before using them interchangeably. A decline in the share of only a particular type of financial intermediary, say commercial banks, does not necessarily mean disintermediation. Similarly, the securitisation in the second sense does not involve disintermediation.

1.9.7 Broad, Wide, Deep and Shallow Markets

All these are closely related terms. The broad and wide financial market attracts funds in greater volume and from all types of national and international investors. In such a market, the financial institutions offer, even globally, 24-hour sales and trading capability in debt and equity instruments. The deep market is one where there are always sufficient orders for buying and selling at fine quotations both below and above the market price, and where there are good opportunities for swap deals. A swap deal is a medium-term or a long-term arrangement between two parties in which each party commits to service the debt of the other. In other words, a swap is the exchange of future streams of payment between two or more parties. The shallow market, on the other hand, means an underdeveloped market, its underdevelopment being the result of the financial repression or the administered finance.

1.9.8 Financial Repression

It represents economic conditions in which the government's regulatory and discretionary policies distort financial prices or interest rates (i.e. the real interest rates are kept low or negative), discourage saving, reduce investment and misallocate financial resources. The government-directed credit programmes, and direct rather than indirect credit controls, predominate in a repressed system. As indicated above, it is also known as the system of administered interest rates and finance.

1.9.9 Financial Reforms, Financial Liberalisation and Deregulation

Financial reforms involve instituting policies which will increase the allocative efficiency of available saving, promote the growth of real sector and enhance the health, stability, profitability and viability of the financial institutions. In theory, they need not necessarily increase the market orientation of the system, but in practice at present, they have come to mean greater market orientation. Therefore, liberalisation, deregulation and reforms mean the same currently. They refer to the policy of reducing or removing completely the legal restrictions, physical or administrative or direct controls, ceilings on interest rates, restrictions on flows of funds, official directives regarding sectoral and other allocations of funds, restrictions on the scope of activities of banks and other financial institutions and so on, which exist under the administered finance. It is obvious that the liberalisation is the process in which the intervention or interference of the government in financial markets is reduced and they are allowed, as far as possible, to function on the basis of free market or competitive principles.

1.9.10 Privatisation

It is regarded as a necessary part of financial reforms. It means increasing the ownership, management and control of the financial sector by individuals and private incorporated and unincorporated bodies. This may be achieved partly by denationalisation, disinvestment by the State, allowing private sector entry and abstaining from new ownership by the State.

1.9.11 Prudential Regulation

This is another major element of financial sector reforms. It means regulation without suppression, and supervision and control without constriction. It implies that the authorities have not abdicated the role of and responsibility for evolving a healthy, strong, sound, safe, stable and viable financial system. It aims at imparting greater transparency and accountability in operation, and restoring credibility and confidence in the financial system. It relates to income recognition, assets classification, provisioning for bad and doubtful debts and capital adequacy. The prudential regulation is the policy of the state with regard to macro- and micro-prudential concerns.

1.9.12 Integration

It refers to the establishment of close connections or effective linkages between different constituents or parts, and between different sub-parts of the financial system. As a result, there are substantial flows of funds

between them, and there is a greater correspondence between interest rates in different parts of the financial system. Financial integration is the opposite of the maturitywise, geographical, institutional, seasonal, instrumental, segmentation or partitioning or compartmentalisation of the financial markets.

1.9.13 Internationalisation and Globalisation

These terms indicate the extension of activities of a financial system beyond the national boundaries. The extension may take place in the form of borrowing as well as lending, and it may take place through official or private or commercial channel. In the process of internationalisation, the domestic financial institutions participate in foreign financial markets, and the foreign institutions participate in domestic markets to a significant extent. In other words, the domestic and foreign financial markets get integrated and inter-linked, and the supply and demand curves of funds assume a different character. When globalisation occurs, financial instruments may be denominated in several currencies, and there would be a convergence of interest rates in different national markets, because interest rate changes originating in one financial centre would be quickly transmitted to other centres.

Sometimes, a distinction is made between internationalisation and globalisation. While the former term is used to indicate the absence of regulation or control of any national authority on financial markets, the latter is said to refer to the establishment of inter-linkages amongst national markets as a result of the progressive liberalisation and the removal of exchange controls. We think that this distinction is not really convincing; it is based on the ideology-induced narrowing down of the meaning of the term 'internationalisation'.

1.9.14 Securitisation

The term 'securitisation' is used in financial literature in two senses. First, it means the faster growth of direct (primary) financial markets and financial instruments than that of financial intermediaries. In other words, it refers to the growing ability and practice of firms to tap the bond, commercial paper and share markets as alternatives to institutional financing. Second, it refers to the process through which the existing assets of the lending financial institutions are 'sold' or 'removed' from their balance sheets through their funding by other investors. In this process, investors are sold securities which evidence their interest in the underlying assets without recourse to the original lender. The redemption of these securities does not become the obligation of the original lender. The payments to the investors are made to the extent of cash flows realised from the underlying assets. What happens is that a number of assets of a given lender having similar characteristics are pooled together, and undivided interests in this pool are sold in the form of what are called Pass Through Certificates (PTC). The tenor (maturity) of the PTC generally matches the average maturity of the pooled assets. The cash flows from the underlying assets are passed through, after retaining management fees, to the holders of PTC in the form of periodic (monthly) payments of interest and principal. The redemption of securities is made only to the extent of the cash flows realised from the underlying assets. The securitisation essentially involves the 'collateralised financing' rather than the 'sale of assets'. The ever-increasing resource requirements and the desire to maintain high levels of disbursements while keeping the overall size of assets within certain limits have led financial institutions to innovate in the form of securitisation. The deal between ICICI and Citibank to securitise ICICI's Sellers Line of Credit Bills of Exchange had marked the first securitisation deal in India.

SUMMARY

- The financial system is a set of complex and closely inter-mixed financial institutions, markets, instruments, services, practices, procedures and so on.
- Financial institutions can be classified as banking and non-banking institutions or as intermediaries and non-intermediaries.
- Financial markets are variously classified as (a) money and capital markets, (b) organised and unorganised markets, (c) primary and secondary markets, (d) formal and informal markets, (e) official and parallel markets, and (f) domestic and foreign markets.
- Financial markets deal in financial securities or instruments and financial services. Financial instruments differ in their investment characteristics such as liquidity, risk, maturity, tax status, rate of return and so on.
- The price in financial markets is known as the 'rate of interest'. Under conditions of perfect competition, the equality between the total expected demand for funds and the total planned supply of funds determines the equilibrium rate of interest.
- The intervention by the authorities in the form of administering interest rates results in excess demand or excess supply of funds, which, in turn, requires the official policy of direct allocation of financial resources.
- The supply of funds depends upon aggregate savings and credit creation by the banking system, while the need for funds depends on the demand for investment, consumer durables, housing and so on.
- The functions of a financial system are to establish a bridge between savers and investors and thereby to encourage saving and investment, to provide finance in anticipation of saving, to enlarge markets over space and time and to allocate financial resources efficiently for socially desirable and productive purposes. The ultimate goal of the financial system is to accelerate the rate of economic development.
- While financial markets may accelerate development, they themselves, in turn, develop with economic development. The relationship between economic development and financial development is thus symbiotic.
- The efficient financial markets are characterised by the absence of information-based gain, by correct evaluation of assets, by maximisation of convenience and minimisation of transactions costs and by maximisation of marginal efficiency of capital.
- In reality, the contribution of the financial system to growth is highly constrained because it does not work efficiently and capital is not the most important barrier to growth. The role of finance in development is believed to be secondary by many experts.
- A framework to evaluate the working of any financial sector must include economic, commercial as well as social and ethical criteria.
- Financial innovations refer to wide ranging changes in the financial system. The introduction of new financial institutions, markets, instruments, services, technology, organisation and so on are parts of financial innovations.
- Financial engineering connotes skilful development and use of new financial technology, creative solutions and tools to cope with financial changes. It involves construction, designing, and deconstruction of innovative financial instruments, institutions and processes to reduce risk and to maximise profits quickly.

- Financial revolution means that the magnitude, speed and spread of changes in the financial sector are simply phenomenal.
- The markets which attract funds in large volume and from all types of investors are known as broad financial markets.
- The markets which provide opportunities for sufficient orders at fine rates below and above the market price are called deep financial markets.
- The underdeveloped markets due to governmental regulations and controls are termed as shallow financial markets.
- Financial repression exists when the regulatory policies of the government distort interest rates, discourage saving, reduce investment and misallocate resources.
- Financial reforms or liberalisation aim at creating a market-oriented, competitive financial system by removing physical, administrative and direct controls.
- Financial integration refers to the establishment of close and effective inter-linkages between various parts and sub-parts of the financial system so that interest rate differentials in the system are minimised.
- Securitisation refers to a fast growth of direct (primary) financial instruments and to a collateralised financing through the 'sale' of existing assets of financial institutions.
- Disintermediation refers to the 'switch out of' the liabilities of financial intermediaries by the investors.
- Internationalisation or globalisation of financial markets occurs when the national and foreign markets become integrated.

KEY TERMS

Financial System	Financial Services	Financial Repression
Intermediary	Financial Regulation	Financial Integration
Non-Intermediary	Financial Liberalisation	Shallow Market
Primary Market	Finance Ratio	Deep Market
Secondary Market	Financial Inter-Relation Ratio	Broad Market
Money Market	Market Efficiency	New Issue ratio
Capital Market	Financial Innovations	Wide Market
Financial Instruments	Financial Engineering	Securitisation

QUESTIONS

1. Define the financial system and discuss the important functions performed by it.
2. What is meant by equilibrium in financial markets?
3. Give a brief explanation of various theories that discuss about the relationship between the financial system and economic development.
4. How does financial development influence the economic development?

5. What do you mean by financial asset? Give some examples of financial asset.
6. What are the different ways of classifying financial markets?
7. Discuss the different criteria to evaluate the financial sector of a country.
8. What are the different types of efficiencies by which the efficiency of the financial system can be judged?
9. Write short notes on the following:
   (i) Financial Innovations
   (ii) Financial Repression
   (iii) Fundamental Valuation Efficiency
   (iv) Financial Engineering
   (v) Securitisation

An Introduction to Security Analysis

2 CHAPTER

Learning Objectives

- **LO 1** Identify risk and its various types
- **LO 2** Recognise the concept of return or yield and its types
- **LO 3** Understand risk-return trade-off and the capital asset pricing model (CAPM)
- **LO 4** Discuss arbitrage pricing model and Fama and French three factor model
- **LO 5** Explain value concepts, general principles of valuation, and how specific securities can be valued
- **LO 6** Compare the two broad approaches used for common stock analysis, that is, fundamental analysis and technical analysis
- **LO 7** Review efficient market hypothesis

2.1 INTRODUCTION

For a good understanding of the financial system, it is necessary to know certain basics of security analysis, the essence of which is the valuation of financial instruments. The value of financial assets depends, among other things, on their return and risk. The objective of this chapter, therefore, is to discuss simple basics or bare elements of security analysis, that is, (a) (i) concepts and types of return and risk, (ii) risk-return trade-off; (b) the methods of valuation of bonds, preference shares (PSs), common stock and convertible securities (CS), (c) the analysis of common stocks, that is, fundamental and technical analysis, and (d) the concept of market efficient hypothesis.[1]

[1]For further insight, see Jones, C.P., *Investments: Analysis and Management*, Second Ed., John Wiley, New York, 1988; Chandra, P., *Financial Management*, Fourth Ed., Tata McGraw-Hill, New Delhi, 1997; Farrel, J.L., Jr., *Portfolio Management*, Second Ed., McGraw-Hill, New York, 1997; Reilly and Brown, *Analysis of Investments and Management of Portfolios*, Chapters 11–14, 10th Edition, Cengage Publication, Delhi, 2012.

2.2 CONCEPT OF RISK

LO 1
Identify risk and its various types

There are three related terms one should understand here—certainty, uncertainty and risk. **Certainty** is a situation wherein the value the variable can take is known with a probability of unity. In a situation of **uncertainty**, the objective probability distribution of values is not known, but the experts can have a feel about the range of values a variable can take along with the chances of their occurrence. These subjective feelings can be translated into subjective probabilities and can be used when objective probabilities are not available. **Risk** is a situation wherein the objective probability distribution of the values a variable can take is known, even though the exact values it would take are not known. The **objective probability** is one which is supported by rigorous theory, past experience and the laws of chance. Strictly speaking, while the risk is measurable, uncertainty is not. Since a situation of uncertainty can be reduced to a situation of risk by using subjective probabilities, the two terms, risk and uncertainty, are generally used interchangeably. In a practically useful way, the risk can be defined as the chance that the expected or prospective advantage, gain, profit or return may not materialise and that the actual outcome of investment may be less than the expected outcome. The greater the variability or dispersion in the possible outcomes, or the broader the range of possible outcomes, the greater will be the risk. Usually, the variance and standard deviation of return serve as the alternative statistical measures of the risk of the security in an absolute sense. Similarly, covariance measures the risk of the security relative to other securities in a portfolio; the way securities vary with each other affects the overall variance and risk of the portfolio. It should be noted here that unless otherwise stated, the discussions on risk invariably and implicitly refer to only the uncertainty of outcomes and not to all (types of) risk. Put differently, unless otherwise stated, 'risk-free' means only the certainty of outcomes (expected variance being zero) and not free from all risk. Government bonds are risk-free in nominal terms but not in real terms. In inflationary conditions, there is no such thing as risk-free asset; in such a situation, there is no asset with certainty of real return.

2.2.1 Types of Risk

There are a number of sources or factors behind risk, and depending upon the source, it is customary total about different types of risk. The following can be said to be the major types of risk.

Systematic versus Unsystematic Risk

The different types of risks are broadly classified as systematic and unsystematic risks. The variability in a security's total return that is directly associated with the overall movements in the general market or economy is called *systematic risk*. This type of risk is inescapable no matter how well the portfolio is diversified. It is caused by a wide range of factors exogenous to securities themselves, viz., recession, war and structural changes in the economy. The other names for systematic risk are '*market risk*' or '*non-diversifiable risk*'; it would be more appropriate to call it a 'systemic' risk. The variability in a security's total return that is not related to the overall market variability is called *unsystematic risk*. An investor can build a diversified portfolio and reduce or eliminate this type of risk. Therefore, it has also been defined as that risk which can be reduced or eliminated through diversification of security holdings. The other names for unsystematic risk are 'non-market risk' or 'diversifiable risk'; it would be more appropriate to call it a 'non-systemic' risk. The unsystematic risk can also be called as idiosyncratic risk, which is specific to the company or any individual. The systematic risk arises due to the fluctuations of the macroeconomic fundamentals such as interest rate, inflation and so on.

Market Risk (Beta)

The capital market and portfolio theories have developed a 'critically important' concept of beta (β) as a measure of relative risk of a security or its sensitivity to the movements in the market. *Beta* indicates the extent to which the risk of a given asset is non-diversifiable; it is a coefficient measuring a security's relative volatility. Statistically, beta is the covariance of a security's return with that of the market for a security class. Alternatively, it is the slope of the regression line relating a security return with the market return. The security with a higher (than 1) beta is more volatile than the market, and the asset with a lower (than 1) beta would rise or fall more slowly than the market.

Figure 2.1 portrays the concept of beta. Line *B* (45 degree line) represents $\beta = 1$ which means that for every one percentage change in the market return, on an average, the security return also will change by 1 percent, that is, both the returns will be volatile to the same extent. Line *A* means that the security return is more volatile than the market return, while, line *C* means that the former is less volatile than the latter.

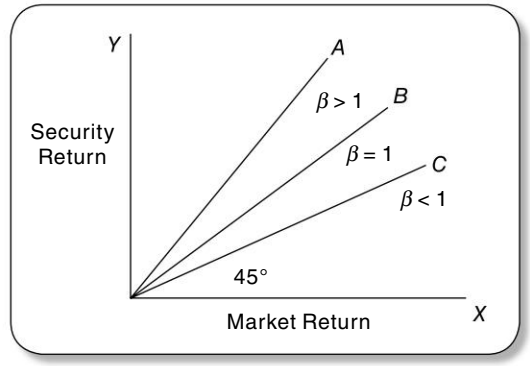

Figure 2.1 Concept of beta.

Interest Rate Risk

Interest rate risk is the variability in return on security due to changes in the level of market interest rates, or it is the loss of principal of a fixed-return security due to an increase in the general level of interest rates. When interest rates rise, the value or market price of the security drops, and *vice versa*. The degree of interest rate risk is directly related to the length of time to maturity of the security; if the term to maturity is long, market value of the security may fluctuate widely (see Bond Price Theorems in a subsequent section). Interest rate risk has two parts; first, the *price risk* resulting from the inverse relationship between the security price and interest rates, and second, the *reinvestment risk* resulting from the uncertainty about the interest rate at which the future coupon income or principal can be reinvested. These two parts of interest rate risk move in opposite directions. If interest rates increase, the price risk increases (because the security price declines) but the reinvestment risk declines (because the reinvestment rate increases). Interest rate risk exists in case of all types of securities including common stock, although it affects bonds more directly than equities. It affects common stock also because market rate of interest is (or it is closely related to) a discount rate, which means that when interest rates rise, the discount rate will be higher and the common stock prices will be lower. Moreover, higher interest rates on debt securities tend to reduce the attractiveness of equities, which can lead to a decline in their prices.

Inflation Risk

Inflation risk is the risk that the real return on a security may be less than the nominal return. In case of fixed income securities, since payments in terms of rupees are fixed, the value of the payments in real terms declines as the level of commodity prices increases. Inflation risk is also known as purchasing power risk as there is always a chance or possibility that the purchasing power of invested money will decline, or that the real (inflation-adjusted) return will decline due to inflation. It may be noted that inflation risk is really the risk of unanticipated or uncertain inflation. If anticipated, inflation can be compensated. Similarly, inflation risk,

like default risk, is more relevant in case of fixed income securities; common stocks are regarded as hedge against inflation. Inflation risk is closely related to interest rate risk since interest rates generally rise when inflation occurs.

Exchange Rate or Currency Risk

Exchange rate risk refers to cash-flow variability experienced by economic units engaged in international transactions or international exchange, on account of uncertain or unexpected changes in exchange rates. Put differently, it is the risk that changes in currency exchange rates may have an unfavourable impact on costs or revenues of, say, business units. There is no exchange rate risk under the fixed exchange rate system, while it is the highest under the freely floating exchange rate system.

Business Risk

Business risk is the uncertainty of income flows that is caused by the nature of a firm's business, that is, by doing business in a particular environment. This risk has two components: internal and external. The former results from the operating conditions or operating efficiency of the firm, and it is manageable within or by the firm. The latter is the result of operating conditions which the firm faces but which are beyond its control. Business risk is measured by the distribution of the firm's operating income (i.e. firm's earnings before interest and tax) over time.

Financial Risk

Financial risk is associated with the use of debt financing by firms or companies. Since the presence of debt involves the legal or mandatory obligation to make specified payments at specified time periods, there is a risk that the earnings of the firm may not be sufficient to meet these obligations towards the creditors. In case of shareholders, the financial risk arises because of not only the mandatory nature of debt obligations but also the property of 'prior payments' of these obligations. In short, the use of debt by the firm causes variability of return for both creditors and shareholders. Financial risk is usually measured by the debt/equity ratio of the firm; the higher this ratio, the greater the variability of return and higher the financial risk.

Default Risk

Default risk arises from the failure on the part of the borrower or debtor to pay the specified amount of interest and/or to repay the principal, both at the time specified in the debt contractor covenant or indenture. It may be noted that the default risk has the capital risk and income risk as its components, and that it means not only the complete failure to pay but also the delay in payment.

Liquidity Risk

Liquidity risk refers to a situation wherein it may not be possible to dispose off or sell the asset, or it may be possible to do so only at great inconvenience and cost in terms of money and time. An asset that can be bought and sold quickly, and without significant price concession and transaction cost is said to be liquid. The greater the uncertainty about time element, price concession and transaction cost, the greater the liquidity risk. Liquidity risk has a different connotation from the point of view of banks and financial institutions. In this context, liquidity risk refers to their inability to meet the liabilities towards depositors when they want to withdraw their deposits.

Maturity Risk

Maturity risk arises when the term of maturity of the security happens to be longer. Since foreseeing, forecasting and envisioning the environment, conditions and situations become more and more difficult as we stretch more and more into the future, the long-term investment involves risk. The longer the term to maturity, the greater is the risk.

Call Risk

Call risk is associated with the corporate bonds which are issued with call-back provision or option whereby the issuer has the right of redeeming the bonds before their maturity. In case of such bonds, the bond holders face the risk of giving up higher coupon bonds, reinvesting proceeds only at lower interest rates, and incurring the cost and inconvenience of reinvestment.

Total Risk

Total risk is the total variability in the return on the asset or the portfolio, whatever the source(s) of that variability. It is the uncertainty or volatility in return due to both security-specific and economy-wide factors. We can say that total risk is the summation of the systematic and unsystematic risk.

Country Risk

All the types of risk discussed so far relate to an investment within a given country. The uncertainty or variability of return in respect of an investment in a foreign country is known as country risk. It is a complicated concept and it has many elements or sources. The political risk is one of its major elements, and the common denominator of political risk is the government intervention in the working of the economy that affects the value of the firm or investment. Economic stability is its another important element.

2.3 CONCEPT AND TYPES OF RETURN OR YIELD

LO 2

Recognise the concept of return or yield and its types

The terms (rate of) return and yield are mostly used interchangeably and we will follow the same practice here. Return is the amount or rate of produce, proceeds, gain, fruit and profit which accrues to an economic agent from an undertaking or enterprise or (real/financial) investment. It is a reward for and a motivating force behind investment, the objective of which is usually to maximise return. Return on a typical investment has two components: the basic one which is the *periodic cash or income receipts*, either interest or dividend; and the other which is the appreciation or depreciation in the price or value of the asset, called the capital gain or the capital loss. The *capital gain (or loss)* is the difference between the purchase price of the asset and the price at which it can be or is sold. The income component is usually but not necessarily received in cash *viz*., stock dividend. The total return on an investment thus can be defined as income plus/minus price appreciation/depreciation.

2.3.1 Internal Rate of Return or Yield Rate

The (average) internal rate of return (IRR) is the rate of discount which makes the present value of all the revenues (cash inflows) from the investment equal to the total cost of that investment. This is also known as the yield or yield rate. The marginal IRR is the rate of discount which makes the present value of the marginal revenue from the (additional) investment equal to unity.

2.3.2 Bond Rate or Coupon Rate

It is the interest rate received on the face value or the par value of the bond. If a company or the government issues a l0-year bond with ₹100 as face value and 15 percent rate of interest, it would be described as 15 percent bond or debenture and it would be said to have a coupon or bond rate of 15 percent.

2.3.3 Realised and Expected Return

Return is not as simple a concept as it appears to be because it is not guaranteed, it is mostly expected, and it may or may not be realised. Thus expected return is an anticipated, predicted, desired and *ex ante* return which is subject to uncertainty. Realised return, on the other hand, is actually earned; it is an *ex post* return.

2.3.4 Holding Period Yield/Return

Holding period yield (HPY) measures the total return from an investment during a given or designated time period in which the asset is held by the investor. It is to be noted that HPY does not mean that the security is actually sold and the gain or loss is actually realised by the investor. The concept of HPY is applicable whether one is measuring the realised return or estimating the future (expected) return. It can be calculated as follows:

$$\text{HPY} = \frac{\text{Any cash payments received} + \text{Price change over the holding period}}{\text{Price at which the asset is purchased (beginning price)}} \quad (2.1)$$

The concept of Holding Period Return (HPR) has been developed from that of HPY in order to take care of certain needs such as calculating a compound rate of return or a geometric mean where negative numbers cannot be used.

$$\text{HPR} = \text{HPY} + 1 \quad (2.2)$$

If HPY is 0.20, HPR will be 1.20, and if HPY is –0.25, the HPR will be 0.75. HPR is always greater than zero, thereby eliminating negative numbers.

2.3.5 Types of Yield[2]

Basic Yield

Basic yield is the lowest yield actually attained in the market by high grade bonds of a given maturity and class. This concept can be understood better by noting the concept of pure rate of interest, which is unique and absolutely riskless; it implies absolute safety and certainty of principal and income, and also freedom from losses through changes in commodity prices, interest rates and taxes. Uniqueness implies a single fundamental rate underlying the entire structure of interest rates. The basic yield, however, does not imply either risklessness or uniqueness; its distinguishing feature is that it is on the highest quality bonds.

[2]For more discussion on yield see Chapter 18.

Current Yield

In case of a bond, current yield is the ratio of stated (coupon) interest per year to the current market price of the bond. It does not take into account the return to be realised by the investor because of the appreciation (depreciation) in the value of the bond. It is also known as the market yield, or running yield or income yield.

Redemption Yield or Yield to Maturity (YTM)

Redemption yield is the indicated or promised rate of return an investor will receive from a bond purchased at the current market price and held till maturity. Thus

$$\text{YTM} = \frac{\text{(Annual interest)} \pm \text{(Average annual appreciation or depreciation)}}{\text{Redemption or face value}} \tag{2.3}$$

Dividend Yield

Dividend yield is the ratio of per share expected or prospective dividends, gross of tax, to the current market price of the share.

Earnings Yield

Earnings yield is the ratio of expected earnings per share of the firm to the current market price of the share. The dividend yield and earnings yield do not differ if the firm distributes all net earnings in the form of dividends, that is, if it practises 100 percent dividend payout ratio.

Nominal and Real Return

While the nominal return is the return in nominal rupees (terms), the real return is equal to the nominal return adjusted for changes in prices, that is, the rate of inflation.

Gross and Net Yield

While gross yield refers to the yield realised by the investor before paying taxes, the net yield is what remains with him after paying the taxes. The net of tax yield can be calculated as follows:

$$\text{Net yield} = \text{Gross yield } (1 - \text{tax rate}) \tag{2.4}$$

Required Rate of Return (RRR)

The concept of required rate of return (RRR) plays an important role in the valuation of assets and in both financial and real investment decisions. The RRR for a security is defined as the minimum expected rate of return needed to induce or persuade an investor to purchase the security, given its risk. The RRR has two components. First, the risk-free rate of return or the real rate of interest (return) or the pure rate of interest or the pure time value of money, which is the basic temporal exchange rate in the economy. It is the reward or price which needs to be paid to the saver to induce him to forgo present consumption in favour of future consumption plus a premium for expected inflation. Strictly speaking, the real rate of return is defined in the context of the absence of the uncertainty and the absence of inflation. But since inflation is usually present in the actual economy, the nominal risk-free rate must contain an inflation premium. Thus, the first component of RRR is the risk-free rate of return which is equal to the real rate of return plus inflation premium. The second component of RRR is the risk premium. The rational risk-averse investors purchasing an asset expect to be compensated for the risk. The premium for risk must reflect all the uncertainty involved in investing in the security. Thus,

$$\text{RRR} = \text{Pure time value of money} + \text{Inflation premium} + \text{Risk premium} \quad (2.5)$$

or

$$\text{RRR} = \text{Risk-free rate of return} + \text{Risk premium} \quad (2.6)$$

It should be noted that there are many financial assets, and, therefore, many required rates of return. They are also different within a particular asset class or category. The RRR may change over a period of time also. The RRR and market interest rates are positively related.

2.4 RISK-RETURN TRADE-OFF

LO 3
Understand risk-return trade-off and the capital asset pricing model (CAPM)

The objective of maximising return can be pursued only at the cost of incurring higher risk. The financial markets offer a wide range of assets from very safe to very risky, with corresponding low to high returns. While selecting the asset for investment, the investor has to consider both its return potential and the risk involved. The empirical evidence shows that generally there is a high correlation between risk and return over longer periods of time. The securities are generally priced such that high risk is rewarded with high return, and low risk is accompanied by a corresponding low return. This relationship is known as risk-return trade-off.

Figures 2.2 and 2.3 portray risk-return trade-off in an *ex ante* sense. In Figure 2.2, the line *AB* (capital market line) depicts the expected return-risk spectrum; the representative asset classes are arrayed over a range of risk on it. As we move from government bonds to international equity, the investor assumes increasing risk in the hope of earning a higher expected return. *AB* is upward sloping and its slope indicates the required return per unit of risk. The figure shows a positive linear relationship between expected return and risk. The rational risk-averse investors will not willingly assume greater risk unless they expect to receive additional return, or if the investors wish to earn larger return, they must be willing to assume greater risk.

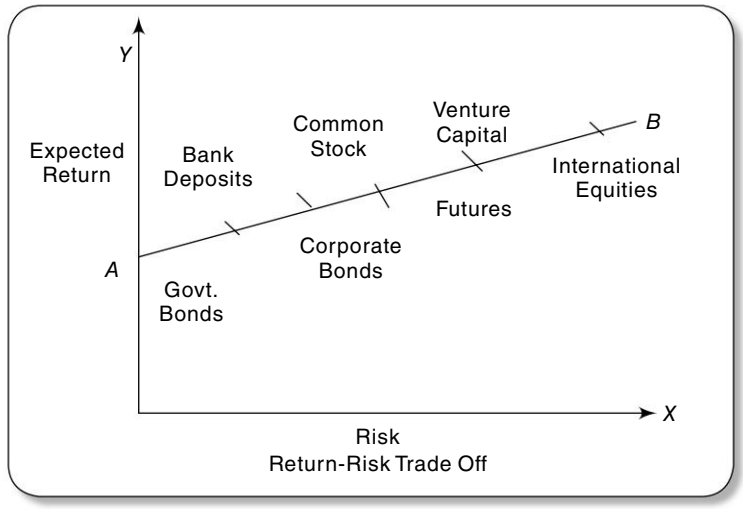

Figure 2.2 Risk-return trade-off.

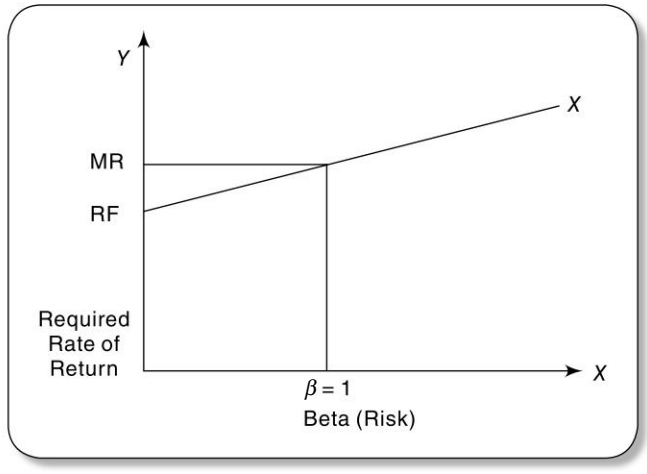

Figure 2.3 **Required rate of return and beta trade-off.**

Figure 2.3 shows the same relationship slightly differently; it relates RRR with beta (risk). It shows that the relationship between them, represented by the line RFX (security market line) is linear. The securities with high beta have high RRR. The securities with betas (risk) greater than the market beta of 1 should have larger risk premium than that of the average stock, and, therefore, when added to MR, they yield a larger RRR. Conversely, securities with beta less than that of the market are less risky and have RRR lower than that for the market as a whole.

2.5 CAPITAL ASSET PRICING MODEL (CAPM)

The Capital Asset Pricing Model (CAPM) is used in finance to determine a theoretically appropriate RRR of an asset, if that asset is to be added to an already well-diversified portfolio, given the non-diversifiable risk associated with that asset. The model takes into account the asset's sensitivity to non-diversifiable risk (also known as systematic risk or market risk), often represented by the quantity beta (β) in the financial industry, as well as the expected return of the market and the expected return of a theoretical risk-free asset. The model was introduced by Jack Treynor, William Sharpe, John Linter and Jan Mossin independently, building on the earlier work of Harry Markowitz on diversification and modern portfolio theory. Sharpe received the Nobel Memorial Prize in Economics (jointly with Markowitz and Merton Miller) for this contribution to the field of financial economics. This model is based on certain assumptions as follows: (1) All investors aim to maximise utilities. (2) All investors are rational risk-averse. (3) All the investors are price takers, that is, they cannot influence prices. (4) They can lend and borrow unlimited under the risk-free rate of interest. (5) Securities are all highly divisible into small parcels. (6) There are no transaction or taxation costs incurred. The CAPM can be represented in equation as follows:

$$E(R_i) = R_f + \beta(R_m - R_f) \tag{2.7}$$

where $E(R_i)$ = Expected return of individual security, R_f = Risk-free rate of return, β = Market risk of individual security, R_m = market return.

The general idea behind CAPM is that investors need to be compensated in two ways: time value of money and risk. The time value of money is represented by the risk-free (R_f) rate in the formula and compensates the investors for placing money in any investment over a period of time. The other half of the formula represents risk and calculates the amount of compensation the investor needs for taking on additional risk. This is calculated by taking a risk measure (beta) that compares the returns of the asset to the market over a period of time and to the market premium ($R_m - R_f$).

Testing CAPM: Evidences from Indian Companies

According to the Capital Asset Pricing Model (CAPM), the market risk(β) is the sole factor which determines the expected return of the stock, which is used as the cost of equity of the company. For testing the validity of CAPM, generally we follow a two-step procedure.

Step-1: Run the time series regression to estimate the market risk (β) following the equation

$$R_i = \beta(R_m)$$

where, R_i is the individual stock return and R_m is market return.

Step-2: After getting the (β) for each company/portfolio, we run a cross-sectional regression to examine whether (β) is statistically significant, and for this, we have used the function $\overline{R_i} = \alpha + \lambda(\beta)$. λ = premium: if the β will be statistically significant, then we can conclude that β gives the premium and the CAPM holds good.

Example: For testing this we have considered 600 companies which are continuously traded in National Stock Exchange (NSE). The time period is April 2010 to March 2015 (60 months data).

First, we run the time series regression for each company using the equation $R_i = \beta(R_m)$. From this estimation we estimated 600 β's.

In the second step, we have taken the average of the return data for each company across the period (60 months). Following this process, we have got 600 return data. Then we have used the equation $\overline{R_i} = \alpha + \lambda(\beta)$ to examine the significance of β in the determination of the expected stock return.

Considering the 600 Indian companies' data, we find that

$$\overline{R_i} = 4.21 + 0.67\,\beta$$
$$(1.37)\ (3.05)$$
$$[0.35]\ [0.001]$$

Values in the parenthesis show the *t*-statistics and values in the square bracket show the probability value. From the result we conclude that (λ) the slope coefficient of 'β' is statistically significant. This implies that CAPM holds good for Indian companies.

2.5.1 Shortcomings of CAPM

- The model assumes that asset returns are (jointly) normally distributed random variables. It is however frequently observed that returns in equity and other markets are not normally distributed.
- The model assumes that the variance of returns is an adequate measurement of risk. This might be justified under the assumption of normally distributed returns, but for general return distributions other risk measures will likely reflect the investors' preferences more adequately.

- The model does not appear to adequately explain the variation in stock returns. Empirical studies show that low beta stocks may offer higher returns than the model would predict.
- The model assumes that given a certain expected return, investors will prefer lower risk (lower variance) to higher risk and conversely, given a certain level of risk will prefer higher returns to lower ones. It does not allow for investors who will accept lower returns for higher risk. Casino gamblers clearly pay for risk, and it is possible that some stock traders will pay for risk as well.
- The model assumes that all investors have access to the same information and agree about the risk and expected return of all assets (homogeneous expectations assumption).
- The model assumes that there are no taxes or transaction costs, although this assumption may be relaxed with more complicated versions of the model.
- The market portfolio consists of all assets in all markets, where each asset is weighted by its market capitalisation. This assumes no preference between markets and assets for individual investors, and that investors choose assets solely as a function of their risk-return profile. It also assumes that all assets are infinitely divisible as to the amount which may be held or transacted.
- The market portfolio should in theory include all types of assets that are held by anyone as an investment. In practice, such a market portfolio is unobservable and people usually substitute a stock index as a proxy for the true market portfolio. Unfortunately, it has been shown that this substitution is not innocuous and can lead to false inferences as to the validity of the CAPM, and it has been said that due to the observability of the true market portfolio, the CAPM might not be empirically testable. This was presented in greater depth in a paper by Richard Roll in 1977, and is generally referred to as Roll's critique.

2.6 ARBITRAGE PRICING MODEL (APT)

LO 4

Discuss arbitrage pricing model and Fama and French three factor model

An asset pricing model based on the idea that an asset's returns can be predicted using the relationship between that same asset and many common risk factors. Created in 1976 by Stephen Ross, this theory predicts a relationship between the returns of a portfolio and the returns of a single asset through a linear combination of many independent macro-economic variables. The arbitrage pricing theory (APT) describes the price where a mispriced asset is expected to be. It is often viewed as an alternative to the CAPM, since the APT has more flexible assumption requirements. Whereas the CAPM formula requires the market's expected return, APT uses the risky asset's expected return and the risk premium of a number of macro-economic factors. Arbitrageurs use the APT model to profit by taking advantage of mispriced securities. A mispriced security will have a price that differs from the theoretical price predicted by the model. By going short an overpriced security, while concurrently going long the portfolio the APT calculations were based on, the arbitrageur is in a position to make a theoretically risk-free profit.

2.7 FAMA AND FRENCH THREE FACTOR MODEL

This is a factor model that expands on the CAPM by adding size and value factors in addition to the market risk factor in CAPM. This model considers the fact that value and small cap stocks outperform markets on a regular basis. By including these two additional factors, the model adjusts for the outperformance tendency,

which is thought to make it a better tool for evaluating market performance. Fama and French attempted to better measure market returns and through research found that value stocks outperform growth stocks; similarly, small cap stocks tend to outperform large cap stocks. As an evaluation tool, the performance of portfolios with a large number of small cap or value stocks would be lower than the CAPM result, as the three factor model adjusts downwards for small cap and value outperformance.

There is a lot of debate about whether the outperformance tendency is due to market efficiency or market inefficiency. On the efficiency side of the debate, the outperformance is generally explained by the excess risk that value and small cap stocks face as a result of their higher cost of capital and greater business risk. On the inefficiency side, the outperformance is explained by market participants mispricing the value of these companies, which provides the excess return in the long run as the value adjusts.

2.8 VALUATION OF SECURITIES

LO 5

Explain value concepts, general principles of valuation, and how specific securities can be valued

Valuation means professionally estimating, assessing, determining, setting the price, worth and value of a thing or an asset. As the objective of any investment is to find out an asset which is worth more than its cost, a proper understanding of the process of valuation is necessary for any real or financial investment decision, portfolio selection and management and financing decision. The valuation techniques provide investors a benchmark or standard of comparison between assets and firms which have varying financial characteristics; it enables investors to appraise the relative attractiveness of assets and firms. Therefore, we discuss below certain (a) value concepts, (b) general principles of valuation and (c) the way in which certain specific securities can be valued.

2.8.1 Value Concepts

Book Value

The book value of an asset or a firm is based on accounting reports. In case of a physical asset, it is equal to the asset's historical cost less accumulated depreciation. In case of a common stock, it is equal to the net worth (paid-up capital + reserves and surplus) of the firm divided by the number of outstanding shares. Symbolically,

Book value of physical asset = Historical cost – Accumulated depreciation

$$\text{Book value of a common stock} = \frac{\text{Networth (Paid-up capital + Reserves and surplus)}}{\text{Number of outstanding shares}}$$

Going-Concern Value

This concept applies to a business firm as a continuing operating unit. It is based primarily on how profitable a firm's operations would be as a continuing entity that is, the entity which is unlikely to go out of business in the foreseeable future.

Liquidation Value

In contrast to the going-concern value, the liquidation value is the value of the business firm which has ceased or wound up its business, or which has gone into liquidation. The liquidation value of an ordinary share is equal to the value realised from liquidating all the assets of the firm minus the amount to be paid to all the creditors, preference shareholders, and other prior claimants divided by the number of outstanding ordinary shares.

Market Value

The market value of an asset is simply the price at which it is traded in the market at a given point of time.

Intrinsic or Present Value

Intrinsic value is also known as fair market value or investment value. It is equal to the present value of a stream of cash flows expected to be generated by the asset. The technique for finding out present value is known as discounting. Market value truly reflects intrinsic value if the market is perfectly competitive.

Terminal Value

The terminal value of the asset or money is the value of today's money at some point of time in future, and the method for ascertaining it is known as compounding.

Time Value of Money

It connotes that a rupee today in hand is worth more than a rupee tomorrow (in future) because it can be invested and made to earn interest immediately, and because the present consumption is valued more than the future consumption by the people.

2.8.2 General Principles of Valuation

Any asset or security derives its value from the cash flows it is expected to generate in future. The present value of the future or delayed pay-off can be found by multiplying that pay-off by the discount factor which is less than one and which can be expressed as follows:

$$\text{Discount factor} = \frac{1}{1 + \text{Discount rate}} \tag{2.8}$$

It follows that to obtain the value of the asset, we need to know two things. One, the expected or projected future cash flows; and two, the discount rate which is also known as the hurdle rate or the opportunity cost of investment. The discount rate is equal to the RRR which is approximated by the rate of return available on the next best opportunity for investment which the investor forgoes by investing in the asset in question. We illustrate below the basic valuation model by giving the present value formulae for only five types of future cash flows, although there is a wide range of possibilities in respect of the types of cash flows.

(i) Cash flow to be received at the end of one year:

$$PV = \frac{c_1}{(1 + r_1)^1} \tag{2.9}$$

(ii) Cash flow to be received at the end of the fifth year:

$$PV = \frac{c_5}{(1+r_5)^5} \tag{2.10}$$

(iii) Continuous uneven (not the same) stream of cash flows to be received at the end of each year for a given period of time:

$$PV = \frac{c_1}{(1+r_1)^1} + \frac{c_2}{(1+r_2)^2} + \ldots + \frac{c_n}{(1+r_n)^n} \tag{2.11}$$

or $$PV = \sum_{t=1}^{n} \frac{c_t}{(1+r_t)^t} \tag{2.12}$$

(iv) Continuous even (fixed) stream of cash flows to be received at the end of each year for a given period of time. This is known as annuity which can be valued as follows:

$$PV = \frac{c}{(1+r_1)^1} + \frac{c}{(1+r_2)^2} + \ldots + \frac{c}{(1+r_n)^n} \tag{2.13}$$

or $$PV = \sum_{t=1}^{n} \frac{c}{(1+r_t)^t} \tag{2.14}$$

or $$PV = C\left[\frac{1}{r} - \frac{1}{r(1+r_t)^t}\right] \tag{2.15}$$

(v) Continuous even (fixed) stream of cash flows to be received indefinitely. This is known as perpetuity and can be valued as follows:

$$PV = \frac{c}{r} \tag{2.16}$$

In all of the above formulae,

PV = Present Value;

C = Cash flow;

t = End of the year (period);

n = Duration of cash flow; and

r = Discount rate.

The term r_t in these equations implies that, in principle, there has to be a different discount rate for different future periods. The higher rate can be applied for the longer maturity. However, since normally a flat term structure of interest rates is assumed in this context, the term r_t can be replaced by the term r. The level of PV of the asset depends upon the timing of the cash flow and the level of discount rate. Given the discount rate, the more further off the pay-off, the lower the PV. Similarly, given the timing the higher the discount rate, the lower the PV. Thus, the PV is inversely related to both the timing of the cash flow and the discount rate. Closely related to the concept of PV is that of Net Present Value (NPV), which is equal to PV minus the required investment or the cash outflows (costs) associated with the investment.

The reverse process of discounting is known as *compounding*. Investment may be at simple interest rate or compound interest rate; in case of the latter, each interest receipt is reinvested to earn further interest in subsequent periods; there is no such possibility in case of the former. There is a considerable difference in the growth of investment under the two schemes.

The terminal value of current investment, if compounded annually, can be obtained as follows:

$$TV = CI\,(1+r)^t \tag{2.17}$$

where TV = Terminal value; CI = Current investment; r = Rate of interest per annum and t = Number of years for which compounding is done. The term $(1 + r)$ is referred to as the compounding factor.

Quite often, compounding is done more frequently than annually, viz., semi-annually or quarterly or monthly. The general compounding model in such a case is as follows:

$$TV = CI\,(1+ r/m)^{mt} \tag{2.18}$$

where m = number of times compounding done during a year; and other terms have the same meaning as given under (2.17).

These general principles of valuation can now be applied for the purpose of valuing certain specific securities.

2.8.3 Valuation of Bonds[3]

A bond or debenture is a contractual financial instrument which obligates its issuer to pay a given sum of money (known as par or face or maturity value) at a contracted date (maturity date) in future, and a periodic interest payment at a fixed rate of interest (coupon rate). Bond is relatively easy to value because its coupon, principal and maturity are well specified or fixed. The level and changes (volatility) in the bond price (value) are determined by the expected interest receipts, maturity, investors' required rate of return, maturity value and changes in the market (current or prevailing) interest rates. Thus,

$$PV = \sum_{t=1}^{n} \frac{c_t}{(1+r)^t} + \frac{FV}{(1+r)^n} \tag{2.19}$$

where PVB = Present value of bond; C = Annual interest receipts; FV = Face value; r = Appropriate required rate of return; and n = Maturity period.

The relationship between interest rates and bond prices has been formalised in what are known as bond price theorems which are given as follows:

(i) When the coupon rate equals the RRR the bond will sell at par; and when the coupon rate is less (greater) than the RRR it will sell at a discount (premium). (ii) The price of the bond approaches its par value as it approaches maturity. (iii) Bond prices move inversely with interest rate changes. (iv) For a given change in interest rates, a change in bond price will be greater if the term to maturity will be longer, that is, the bond price volatility and the length of maturity are directly related. But the percentage change in the bond price or the degree of sensitivity of bond price to changes in interest rates increases at a diminishing rate as the term to maturity (the time remaining until maturity) increases. (v) Holding maturity constant, a decrease in interest rates raises bond prices more than an equal increase in interest rates lowers them. It means that the capital gains from a decrease in interest rates will always exceed the capital losses from an equal increase in interest

[3] For more details please refer Chapter 18.

rates. (vi) The higher the coupon rate, the smaller will be the percentage price change due to any given change in interest rates. It means that the bond price volatility and bond coupon rate are inversely related.[4]

2.8.4 Valuation of Preference Shares[5]

The valuation of preference share (PS) is difficult in one sense and easy in another. It is difficult because there are many types of PS. But if we assume that PS is a perpetual security (which it basically is), its valuation becomes relatively easy. Thus, assuming that PS earns a fixed rate of return for an infinite period of time, its value can be calculated as follows:

$$PV_{\text{ps}} = \frac{D_{\text{ps}}}{r_{\text{ps}}} \tag{2.20}$$

where PV_{ps} = Present value of PS, D_{ps} = Dividend on PS and r_{ps} = the RRR on PS.

2.8.5 Valuation of Convertible Securities

A CS is a bond or a PS that can be converted into the common stock of the same company at specified conversion terms at the option of the investor. The valuation of such a security is quite complex. We illustrate it by briefly discussing the principles, considerations involved in valuing convertible bond or debenture (CB or CD). In this context, it is essential to know the meaning of the following terms:

- **Conversion Ratio** (CR) is the number of shares the investor receives on conversion of a bond.
- **Conversion Price** or Exercise Price (Rate) or Strike Price (Rate) is the par value of the bond divided by the CR.
- **Conversion Value** at the time of issuance of bond is its CR times the market price per share.
- **Conversion Premium** is the differential between the conversion value and the price at which the bond is sold or issued.

In case of valuing CB, one has to remember that it is both a debt security and a common stock. It offers the purchaser a stream of interest payments and a return of principle on maturity; and also the capital gain if the price of CS rises sufficiently. Every CB has a bond value or investment value or straight debt value which is equal to the price at which the bond would sell with no conversion option, and this price is given by the bond value formula (2.19) presented earlier in this chapter. Similarly, every CB has a conversion option value or conversion value or the value of the common stock received upon conversion. It can be obtained as follows:

$$PV_{\text{CB}} = \left[\sum_{q=t+1}^{n} \frac{c}{(1+r)^q}\right] + \frac{p_{e,m} \times CR}{(1+r)^{m,t}} \tag{2.21}$$

where CVCB = Conversion value of CB; C = Periodic interest receivable till the time of conversion; m = Time of conversion; CR = Conversion ratio; $P_{e,m}$ = Price per equity share at time where m is the time of conversion; and r = Investor's RRR.

It may be noted that this conversion value is the value of conversion option per bond. To get the per share value of the conversion option, we have to divide conversion value by the number of shares into which each

[4]Farre1, J.L., Jr., *op. cit*., pp. 130–132.
[5]Example is provided in Chapter 19.

bond can be converted. Every CB has a floor or minimum value; it will always sell for no less than the greater of (a) its bond value, or (b) its conversion value. This is so because the conversion option has a positive value and the investors are willing to pay a higher price for such an option. Further, CB offers investors downside protection, thereby reducing their risk. It means that even if the price of CS declines sharply leading to a sharp decline in the conversion value, the CB will still sell as a bond at its bond value.

Example: A 5-year CB with a par value of ₹1000 has a CR of 20. Its market price is ₹1100. Currently the common stock of the same company is trading at ₹40 per share. Determine the conversion price? Also, calculate the conversion value and conversion premium of this bond.

Conversion price = 1000/20 = ₹50

Conversion value = ₹40 × 20 = ₹800, conversion premium (in ₹) = ₹1100 – ₹800 = ₹300 conversion premium (in %) = ₹300/₹1000 = 30%.

2.8.6 Common Stock Valuation

Over the years due to the complexities in the valuation of equity, various techniques have been devised. All these techniques follow the two major approaches such as (i) discount cash flow valuation (DCF) techniques, and (ii) relative valuation techniques. In the DCF technique, the value of the stock is estimated based on the present value of the cash flow such as dividends and free cash flow to equity. In the relative valuation technique, the value of the stock is estimated based upon its current price relative to the variables considered to be significant to valuation, such as cash flow, sales, book value, earnings and so on. The following sections discuss both the approaches.

Dividend Capitalization Model (DCM)

Since dividends are the only cash payments shareholders receive directly from the companies, they are regarded as a foundation of CS valuation. However, there are no fixed dividends and maturity period in case of CS. Therefore, usually, the following three types of assumptions regarding the flow of dividends are made in order to find out the value of shares: (I) Dividends remain constant. (II) Dividends grow at a constant rate. (III) Dividends grow at a variable rate. Let us briefly discuss these cases.

(i) Constant Dividends: When it is assumed that the future dividends would be equal to the current dividend, it becomes a case of perpetuity (such as PSs), and, therefore,

$$PV_{cs} = \frac{D_0}{r_{cs}} \tag{2.22}$$

where PV_{cs} = Present value of common stock; D_0 = Current dividend expected to be received in future also and r_{cs} = RRR appropriate for equity.

(ii) Constant Rate of Growth of Dividends[6]: When it is assumed that, starting with the current dividends (D_0), dividends would grow at a constant or normal rate of growth g over an indefinite time horizon, and that the discount rate is greater than this growth rate, the price of CS would be as follows:

$$PV_{cs} = \frac{D_1}{r_{cs} - g} \tag{2.23}$$

[6]Detail derivation is provided in Chapter 19.

where D_1 = Dividend expected to be received at the end of year 1; g = Expected (constant) rate of growth of current dividend; and the other terms have the same meaning as given under Eq. (2.22).

(iii) Variable Growth Rate of Dividends[7]: The third assumption is that there is a supernormal growth in dividends. For example, they grow at the rate g_1 for the first 5 years and g_2 thereafter. One can assume 2 or 3 or any number of growth rates or stages of growth, but, usually, the discussion is confined to two growth rates model. Usually, it is also assumed that $g_1 > g_2$. The price of CS can then be arrived at as follows:

$$PV_{cs} = \sum_{t=1}^{n} \frac{D_0(1+g_1)}{(1+r_{cs})^t} + \frac{1}{(1+r_{cs})^n} \times P_n \tag{2.24}$$

where $P_n = D_{n+1}/(r_{cs} - g_2)$, D_0 = Current dividend; g_1= its supernormal growth rate; n = number of years of supernormal growth; P_n = price of stock at the end of super-normal growth period which is based on the dividend growth rate of g_2 from $n + 1$ to infinite and the other terms have the same meaning as given above.

It has been suggested by some that the industrial life-cycle framework in which the pioneering stage, the maturity stage, and the stability stage are characterised by varying growth rates can help investors to ascertain the growth stage of the company, and, accordingly to form a judgement regarding the level and duration of growth rate. Apparently, the DCM stresses only the dividends in valuing CS. Is expected price at some point of time in future of no relevance in determining the current price of CS? The answer is that since the price of stock at any point in future would be a function of dividends to be received thereafter, its price today is best thought of as the discounted value of all future dividends. In other words, discounting only expected dividend cash flows, and discounting a combination of such cash flows and expected future price, say, 7 years hence, would yield the same present value of the CS.

Similarly, we can incorporate the effect of total net earnings on share value by slightly modifying the DCM. Let E be the earnings of the firm and b the retention ratio. Then $1 - b$ is the dividend payout ratio, and $E(1 - b)$ is the dividends distributed by the company. Further, let k be the rate of return on retained earnings, which can be multiplied by the retention ratio to obtain the growth rate in earnings. The value of CS would then be as follows:

$$PV_{cs} = \frac{(1-b)E}{r_{cs} - bK} \tag{2.25}$$

where the terms have the meaning as given above.

Relative Valuation Models

In reality most valuations are relative valuations. In relative valuation, the value of an asset is derived from the pricing of 'comparable' assets that are standardised using a common variable such as earnings, cash flows, book value or revenues. One illustration of this approach is the use of an industry-average price-earnings ratio to value a firm. This assumes that the other firms in the industry are comparable to the firm being valued and that the market values those firms correctly. Another multiple in wide use is the price-to-book value ratio, with firms selling at a discount on book value, relative to comparable firms, being considered undervalued. The multiple of price to sales is also used to value firms, with the average price-sales ratios of firms with similar characteristics being used for comparison.

[7]Example is provided in Chapter 19.

Unlike discounted cash flow valuation, which we described as a search for intrinsic value, we are much more reliant on the market when we use relative valuation. In other words, we assume that the market is correct in the way it prices stocks, on average, but that it makes errors on the pricing of individual stocks. We also assume that a comparison of multiples will allow us to identify these errors, and that these errors will be corrected over time. The assumption that markets correct their mistakes overtime is common to both discounted cash flow and relative valuation, but those who use multiples and comparables to pick stocks argue, with some basis, that errors made by mistakes in pricing individual stocks in a sector are more noticeable and more likely to be corrected quickly. For instance, they would argue that a software firm that trades at a price earnings ratio of 10, when the rest of the sector trades at 25 times earnings are clearly undervalued and that the correction towards the sector average should occur sooner rather than later. Proponents of discounted cash flow valuation would counter that this is small consolation if the entire sector is overpriced by 50 percent.

Categorising Relative Valuation Models

Analysts and investors are endlessly inventive when it comes to using relative valuation. Some compare multiples across companies, while others compare the multiple of a company to the multiples it used to trade in the past. While most relative valuations are based upon comparables, there are some relative valuations that are based upon fundamentals.

I. Fundamentals versus Comparables

In discounted cash flow valuation, the value of a firm is determined by its expected cash flows. Other things remaining equal, higher cash flows, lower risk and higher growth should yield higher value. Some analysts who use multiples go back to these discounted cash flow models to extract multiples. Other analysts compare multiples across firms or time, and make explicit or implicit assumptions about how firms are similar or vary on fundamentals.

Using Fundamentals: The first approach relates multiples to fundamentals about the firm being valued—growth rates in earnings and cash flows, payout ratios and risk. This approach to estimating multiples is equivalent to using discounted cash flow models, requiring the same information and yielding the same results. Its primary advantage is to show the relationship between multiples and firm characteristics, and allows us to explore how multiples change as these characteristics change. For instance, what will be the effect of changing profit margins on the price/sales ratio (PS)? What will happen to price-earnings ratios as growth rates decrease? What is the relationship between price-book value ratios and return on equity?

Using Comparables: The more common approach to using multiples is to compare how a firm is valued with how similar firms are priced by the market, or in some cases, with how the firm was valued in prior periods. As we know, finding similar and comparable firms is often a challenge and we have to often accept firms that are different from the firm being valued on one dimension or the other. When this is the case, we have to either explicitly or implicitly control for differences across firms on growth, risk and cash flow measures. In practice, controlling for these variables can range from the naïve (using industry averages) to the sophisticated (multivariate regression models where the relevant variables are identified and we control for differences).

II. Cross-Sectional versus Time Series Comparisons

In most cases, analysts price stocks on a relative basis by comparing the multiple it is trading to the multiple at which other firms in the same business are trading. In some cases, however, especially for mature firms with long histories, the comparison is done across time.

Cross-sectional Comparisons: When we compare the price earnings ratio of a software firm to the average price earnings ratio of other software firms, we are doing relative valuation and we are making cross-sectional comparisons. The conclusions can vary depending upon our assumptions about the firm being valued and the comparable firms. For instance, if we assume that the firm we are valuing is similar to the average firm in the industry, we would conclude that it is cheap if it trades at a multiple that is lower than the average multiple. If, on the other hand, we assume that the firm being valued is riskier than the average firm in the industry, we might conclude that the firm should trade at a lower multiple than other firms in the business. In short, you cannot compare firms without making assumptions about their fundamentals.

Comparisons across time: If you have a mature firm with a long history, you can compare the multiple it trades today to the multiple it used to trade in the past. Thus, Ford Motor Company may be viewed as cheap because it trades at six times earnings, if it has historically traded at ten times earnings. To make this comparison, however, you have to assume that your firm has not changed its fundamentals over time. For instance, you would expect a high growth firm's price earnings ratio to drop and its expected growth rate to decrease over time as it becomes larger. Comparing multiples across time can also be complicated by changes in the interest rates over time and the behaviour of the overall market. For instance, as interest rates fall below historical norms and the overall market increases, you would expect most companies to trade at much higher multiples of earnings and book value than they have historically.

Earnings Multiples

One of the more intuitive ways to think of the value of any asset is the multiple of the earnings that asset generates. When buying a stock, it is common to look at the price paid as a multiple of the earnings per share generated by the company. This price/earnings (P/E) ratio can be estimated using current earnings per share, yielding a current PE, earnings over the last four quarters, resulting in a trailing PE, or expected earnings per share in the next year, providing a forward PE. When buying a business, as opposed to just the equity in the business, it is common to examine the value of the firm as a multiple of the operating income or the earnings before interest, taxes, depreciation and amortization (EBITDA). While, as a buyer of the equity or the firm, a lower multiple is better than a higher one. These multiples will be affected by the growth potential and risk of the business being acquired. The stocks are categorised by the market in classes of those selling at say, 10 times or 15 times or 60 times earnings. On the basis of such classification investors are willing to pay the price for the share such that it is equal to the actual earnings of the company in the current year or its estimated earnings during the next 12 months multiplied by the P/E ratio.

Book Value or Replacement Value Multiples

While markets provide one estimate of the value of a business, accountants often provide a very different estimate of the same business. The accounting estimate of book value is determined by accounting rules and is heavily influenced by the original price paid for assets and any accounting adjustments (such as depreciation) made since. Investors often look at the relationship between the price they pay for a stock and the book value of equity (or net worth) as a measure of how overvalued or undervalued a stock is; the price/book value ratio that emerges can vary widely across industries, depending again upon the growth potential and the quality of the investments in each. When valuing businesses, you estimate this ratio using the value of the firm and the book value of all the assets (rather than just the equity). For those who believe that book value is not a good measure of the true value of the assets, an alternative is to use the replacement cost of the assets; the ratio of the value of the firm to replacement cost is called Tobin's Q.

Revenue Multiples

Both earnings and book value are accounting measures and are determined by accounting rules and principles. An alternative approach, which is far less affected by accounting choices, is to use the ratio of the value of an asset to the revenues it generates. For equity investors, this ratio is the price/sales ratio (PS), where the market value per share is divided by the revenues generated per share. For firm value, this ratio can be modified as the value/sales ratio (VS), where the numerator becomes the total value of the firm. This ratio, again, varies widely across sectors, largely as a function of the profit margins in each. The advantage of using revenue multiples, however, is that it becomes far easier to compare firms in different markets, with different accounting systems at work, than it is to compare earnings or book value multiples.

Sector-Specific Multiples

While earnings, book value and revenue multiples are multiples that can be computed for firms in any sector and across the entire market, there are some multiples that are specific to a sector. For instance, when internet firms first appeared on the market in the later 1990s, they had negative earnings and negligible revenues and book value. Analysts looking for a multiple to value these firms divided the market value of each of these firms by the number of hits generated by that firm's website. Firms with a low market value per customer hit were viewed as more undervalued. More recently, retailers have been judged by the market value of equity per customer in the firm, regardless of the longevity and the profitability of the customers. While there are conditions under which sector-specific multiples can be justified, they are dangerous for two reasons. First, since they cannot be computed for other sectors or for the entire market, sector-specific multiples can result in persistent over- or undervaluations of sectors relative to the rest of the market. Thus, investors who would never consider paying 80 times revenues for a firm might not have the same qualms about paying $2000 for every page hit (on the website), largely because they have no sense of what high, low or average is on this measure. Second, it is far more difficult to relate sector-specific multiples to fundamentals, which is an essential ingredient to using multiples well. For instance, does a visitor to a company's website translate into higher revenues and profits? The answer will not only vary from company to company, but will also be difficult to estimate looking forward.

The Four Basic Steps to Using Multiples

Multiples are easy to use and easy to misuse. There are four basic steps to using multiples wisely and for detecting misuse in the hands of others. The first step is to ensure that the multiple is defined consistently and that it is measured uniformly across the firms being compared. The second step is to be aware of the cross-sectional distribution of the multiple, not only across firms in the sector being analysed but also across the entire market. The third step is to analyse the multiple and understand not only what fundamentals determine the multiple but also how changes in these fundamentals translate into changes in the multiple. The final step is finding the right firms to use for comparison and controlling for differences that may persist across these firms.

2.9 ANALYSIS OF COMMON STOCKS

There are two broad approaches used for common stock analysis, that is, fundamental analysis and technical analysis. These two approaches are used for taking investment decisions in the market. The following section discusses both the approaches briefly.[8]

LO 6

Compare the two broad approaches used for common stock analysis, that is, fundamental analysis and technical analysis

2.9.1 Fundamental Analysis

This approach believes that the price or the intrinsic value of common stock is determined by certain basic economic factors or economic fundamentals. It also holds that the market price and the intrinsic value of common stock can differ for some time, but they would eventually tend to be equal. Fundamental analysis is the examination of the underlying forces that affect the wellbeing of the economy, industry groups and companies. As with most analysis, the goal is to derive a forecast and profit from future price movements. At the company level, fundamental analysis may involve examination of financial data, management, business concept and competition. At the industry level, there might be an examination of supply and demand forces for the products offered. For the national economy, fundamental analysis might focus on economic data to assess the present and future growth of the economy. To forecast future stock prices, fundamental analysis combines economic, industry, and company analysis to derive a stock's current fair value and forecast future value. If the fair value is not equal to the current stock price, fundamental analysts believe that the stock is either over- or undervalued and the market price will ultimately gravitate towards the fair value. Fundamentalists do not heed the advice of the random walkers and believe that markets are weak-form efficient. By believing that prices do not accurately reflect all available information, fundamental analysts look to capitalise on perceived price discrepancies. There are two approaches for analysing fundamental analysis such as (i) Top-Down Approach, and (ii) Bottom-Up Approach. To begin the Top-Down valuation process, it is necessary to begin with economic analysis. If we can envision an inverted pyramid with three sections; the first section (from the top) holds economic variables used to measure the health of the economy. The centre section holds industry variables. The bottom section, the smallest section of the pyramid, holds valuation variables of the individual firm. A Bottom-Up approach is the opposite of the Top-Down approach. Those engaging in Bottom-Up investment analysis are many times called 'Stock Pickers' because they begin with a stock then investigate the industry of that stock, then assess whether the economy is favouring that industry. Or they do no analysis at all, meaning that they were privy to a 'hot stock' tip from a friend. Below we have discussed the steps of the Top-down Approach.

Economic Analysis

The economic factors affect the value of the stock as due to change in the macroeconomic factors such as business cycle, monetary policy, fiscal policy, and inflation, both the expected cash flow and the discount rate get affected. For example, a restrictive monetary policy which reduces the growth rate of money supply reduces the supply of funds for expansion of business, and due to increase in the interest rate, the cost of capital increases. Fiscal policy initiatives such as increase or decrease in the government expenditure influence the business activity and the value of the stocks. Unexpected changes in the inflation rate affect

[8]For detailed analysis please see Reilly and Brown, *Analysis of Investments and Management of Portfolios*, Chapters 11–14, 10th Edition, Cengage Publication, Delhi, 2012.

the growth and innovation of the firm and it also influences the trade balance and exchange rate, which in turn, affects the value of the stock. In addition to this, other factors such as political instability, war and international market fluctuations add to the uncertainty in business and, therefore, the risk premium of the investor increases and also the discount rate and finally the value of the stock.

Industry Analysis

The objective of the industry analysis is to identify which industry will prosper or suffer in different macroeconomic conditions. This is the second step in the valuation process of a common stock. Alternative industries react to the economic changes at different points in the business cycle. The industry analysis answers certain questions such as (i) is there any difference between the returns for alternative industries during specific time periods?, (ii) is the performance of the industry consistent over the time?, (iii) is there a difference in the risk for alternative industries? The process of industry analysis is as follows[9]: analysis of (i) business cycle and various industries, (ii) economic changes and alternative industries, (iii) evaluation of life cycle of the industry, and (iv) the competitive environment in an industry.

Company Analysis

After analysing the industry an investor analyses and compares an individual company's performance relative to the entire industry using various financial ratios which are based on the companies' profitability, efficiency, liquidity, and growth opportunity. This analysis helps the investor to answer the questions such as (i) which are the best companies within the selected industry?, and (ii) what is the intrinsic value of the stock, that is, the intrinsic value above the market value or below the market value? The SWOT analysis is applied to analyse the strength, weakness, opportunities and threats of the company within the industry. On the basis of various ratios the companies are classified into different types, such as, growth companies, defensive companies, cyclical companies, and so on. The *growth company* is a company which is consistently able to make investments that yield the rate of return greater than the company's required rate of return. The *defensive company* is that company whose future earnings are likely to sustain in the recessionary period also. The cyclical company's sales and earnings are heavily influenced by the business cyclic conditions.

2.9.2 Technical Analysis

This involves a methodology for forecasting fluctuations in prices of individual securities or portfolios of securities. It holds that changes in share prices can be detected by analysing the market activity, that is, by studying either the patterns of past price fluctuations or the movements in certain technical indicators. The underlying economic variables which affect the company and the markets are not considered important in this approach. Technical analysis is applicable to stocks, indices, commodities, futures or any tradable instrument where the price is influenced by the forces of supply and demand. Price refers to any combination of the open, high, low or close for a given security over a specific time frame. The time frame can be based on intra day (1-minute, 5-minutes, 10-minutes, 15-minutes, 30-minutes or hourly), daily, weekly or monthly price data and lasts a few hours or many years. In addition, some technical analysts include volume or open interest figures with their study of price action.

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[9] Reilly and Brown, *Analysis of Investments and Management of Portfolios*, Chapters 11–14, 10th Edition, Cengage Publication, Delhi, 2012.

2.9.3 Basis for Technical Analysis

Price Discounts Everything

This theorem is similar to the strong and semi-strong forms of market efficiency. Technical analysts believe that the current price fully reflects all the information. Because all the information is already reflected in the price, it represents the fair value, and should form the basis for analysis. After all, the market price reflects the sum knowledge of all the participants, including traders, investors, portfolio managers, buy-side analysts, sell-side analysts, market strategist, technical analysts, fundamental analysts and many others. It would be folly to disagree with the price set by such an impressive array of people with impeccable credentials. Technical analysis utilises the information captured by the price to interpret what the market is saying with the purpose of forming a view on the future.

Price Movements are not Totally Random

Most technicians agree that prices follow the trend. However, most technicians also acknowledge that there are periods when prices do not follow trend. If prices were always random, it would be extremely difficult to make money using technical analysis. In his book, Schwager on Futures: Technical Analysis, Jack Schwager states: 'One way of viewing it is that markets may witness extended periods of random fluctuation, interspersed with shorter periods of non-random behaviour. The goal of the chartist is to identify those periods (i.e. major trends).' A technician believes that it is possible to identify a trend, invest or trade based on the trend and make money as the trend unfolds. Because technical analysis can be applied to many different time frames, it is possible to spot both short-term and long-term trends. Technical analysis considers 'What' is more important than 'Why'. In his book, The Psychology of Technical Analysis, Tony Plummer paraphrases Oscar Wilde by stating, 'A technical analyst knows the price of everything, but the value of nothing'. Technicians, as technical analysts are called, are only concerned with two things: (i) What is the current price? (ii) What is the history of the price movement? The price is the end result of the battle between the forces of supply and demand for the company's stock. The objective of analysis is to forecast the direction of the future price. By focusing on the price and only price, technical analysis represents a direct approach.

Fundamentalists are concerned with why the price is what it is. For technicians, the why portion of the equation is too broad and many times the fundamental reasons given are highly suspect. Technicians believe it is best to concentrate on what and never mind why. Why did the price go up? It is simple, more buyers (demand) than sellers (supply). After all, the value of any asset is only what someone is willing to pay for it. Who needs to know why? Technical analysis can be as complex or as simple as you want it. The analysis below represents a simplified version. Since we are interested in buying stocks, the focus will be on spotting bullish situations.

Overall Trend

The first step is to identify the overall trend. This can be accomplished with trendlines, moving averages or peak/trough analysis. As long as the price remains above its uptrend line, selected moving averages, or previous lows, the trend will be considered bullish.

Support

Areas of congestion or previous lows below the current price mark support levels. A break below support would be considered bearish.

Resistance

Areas of congestion and previous highs above the current price mark the resistance levels. A break above resistance would be considered bullish.

Momentum

Momentum is usually measured with an oscillator such as moving average convergence divergence (MACD). If MACD is above its 9-day EMA (exponential moving average) or positive, then momentum will be considered bullish or at least improving.

Buying/Selling Pressure

For stocks and indices with volume figures available, an indicator that uses volume is used to measure buying or selling pressure. When Chaikin Money Flow is above zero, buying pressure is dominant. Selling pressure is dominant when it is below zero.

Relative Strength

The price relative is a line formed by dividing the security by a benchmark. For stocks it is usually the price of the stock divided by the benchmark index. The plot of this line over a period of time will tell us if the stock is outperforming (rising) or underperforming (falling) the major index.

The final step is to synthesise the above analysis to ascertain the following: (i) strength of the current trend, (ii) maturity or stage of current trend, (iii) reward to risk ratio of a new position, and (iv) potential entry levels for new long position.

StockCharts.com's Chief Technical Analyst, John Murphy has explained 10 rules of technical analysis as follows:

Map the Trends

Study long-term charts. Begin a chart analysis with monthly and weekly charts spanning several years. A larger scale map of the market provides more visibility and a better long-term perspective on a market. Once the long-term view has been established, then consult daily and intra-day charts. A short-term market view alone can often be deceptive. Even if you only trade the very short term, you will do better if you're trading in the same direction as the intermediate and longer term trends.

Spot the Trend and Go with It

Determine the trend and follow it. Market trends come in many sizes—long-term, intermediate-term and short-term. First, determine which one you're going to trade and use the appropriate chart. Make sure you trade in the direction of that trend. Buy dips, if the trend is up. Sell rallies, if the trend is down. If you're trading the intermediate trend, use daily and weekly charts. If you're day trading, use daily and intra-day charts. But in each case, let the longer range chart determine the trend, and then use the shorter term chart for timing.

Find the Low and High of It

Find support and resistance levels. The best place to buy a market is near support levels. That support is usually a previous reaction low. The best place to sell a market is near resistance levels. Resistance is usually a previous peak. After a resistance peak has been broken, it will usually provide support on subsequent pullbacks. In other words, the old 'high' becomes the new low. In the same way, when a support level has been broken, it will usually produce selling on subsequent rallies—the old 'low' can become the new 'high.'

Know How Far to Backtrack

Measure percentage retracements. Market corrections, up or down usually retrace a significant portion of the previous trend. You can measure the corrections in an existing trend in simple percentages. A 50 percent retracement of a prior trend is most common. A minimum retracement is usually one-third of the prior trend. The maximum retracement is usually two-thirds.

Draw the Line

Draw trend lines. Trend lines are one of the simplest and most effective charting tools. All you need is a straight edge and two points on the chart. Uptrend lines are drawn along two successive lows. Downtrend lines are drawn along two successive peaks. Prices will often pull back to trend lines before resuming their trend. The breaking of trend lines usually signals a change in trend. A valid trend line should be touched at least three times. The longer a trend line has been in effect, and the more times it has been tested, the more important it becomes.

Follow that Average

Follow moving averages. Moving averages provide objective buy and sell signals. They tell you if the existing trend is still in motion and help confirm a trend change. Moving averages do not tell you in advance, however, that a trend change is imminent. A combination chart of two moving averages is the most popular way of finding trading signals. Some popular futures combinations are 4- and 9-day, 9- and 18-day and 5- and 20-day moving averages. Signals are given when the shorter average line crosses the longer. Price crossings above and below a 40-day moving average also provide good trading signals. Since moving average chart lines are trend-following indicators, they work best in a trending market.

Learn the Turns

Track oscillators. Oscillators help identify overbought and oversold markets. While moving averages offer confirmation of a market trend change, oscillators often help warn us in advance that a market has rallied or fallen too far and will soon turn. Two of the most popular are the Relative Strength Index (RSI) and Stochastics. They both work on a scale of 0–100. With the RSI, readings over 70 are overbought while readings below 30 are oversold. The overbought and oversold values for Stochastics are 80 and 20. Most traders use 14 days or weeks for stochastics and either 9 or 14 days or weeks for RSI. Oscillator divergences often warn of market turns. These tools work best in a trading market range. Weekly signals can be used as filters on daily signals. Daily signals can be used as filters for intra-day charts.

Know the Warning Signs

Trade MACD. The MACD indicator (developed by Gerald Appel) combines a moving average crossover system with the overbought/oversold elements of an oscillator. A 'buy' signal occurs when the faster line crosses above the slower and both lines are below zero. A 'sell' signal takes place when the faster line crosses below the slower from above the zero line. Weekly signals take precedence over daily signals. An MACD histogram plots the difference between the two lines and gives even earlier warnings of trend changes. It is called a 'histogram' because vertical bars are used to show the difference between the two lines on the chart.

Trend or Not a Trend

Use ADX. The average directional movement index (ADX) line helps determine whether a market is in a trending or a trading phase. It measures the degree of trend or direction in the market. A rising ADX line

suggests the presence of a strong trend. A falling ADX line suggests the presence of a trading market and the absence of a trend. A rising ADX line favours moving averages; a falling ADX favours oscillators. By plotting the direction of the ADX line, the trader is able to determine which trading style and which set of indicators are most suitable for the current market environment.

Know the Confirming Signs

Include volume and open interest. Volume and open interest are important confirming indicators in futures markets. Volume precedes price. It is important to ensure that heavier volume is taking place in the direction of the prevailing trend. In an uptrend, heavier volume should be seen on up days. Rising open interest confirms that new money is supporting the prevailing trend. Declining open interest is often a warning that the trend is near completion. A solid price uptrend should be accompanied by rising volume and rising open interest.

2.10 EFFICIENT MARKET HYPOTHESIS

LO 7
Review efficient market hypothesis

The Efficient Market Hypothesis (EMH) states that at any given time, security prices fully reflect all the available information. The implications of the EMH are truly profound. Most individuals who buy and sell securities (stocks in particular), do so under the assumption that the securities they are buying are worth more than the price that they are paying, while securities that they are selling are worth less than the selling price. But if markets are efficient and current prices fully reflect all information, then buying and selling securities in an attempt to outperform the market will effectively be a game of chance rather than skill.

The EMH is associated with the idea of a 'random walk,' which is a term loosely used in the finance literature to characterise a price series where all subsequent price changes represent random departures from previous prices. The random walk theory asserts that price movements will not follow any patterns or trends and that past price movements cannot be used to predict future price movements. The logic of the random walk idea is that if the flow of information is unimpeded and information is immediately reflected in stock prices, then tomorrow's price change will reflect only tomorrow's news and will be independent of the price changes today.

2.10.1 Alternative Efficient Market Hypotheses

Most of the earlier research on this topic was based on the 'random walk hypothesis'. The celebrated article by Fama (1970) attempted to formalise the theory and empirical evidences in a broader way. Fama has presented the efficient market theory in term of a fair game model contending that investors can be sure that a current market price fully reflects all available information about a security and the expected return based upon this price is consistent with its risk. He has divided the overall EMH into three sub hypotheses based on the information set involved: (1) Weak form of efficiency, (2) Semi-Strong form of efficiency, and (3) Strong form of efficiency. Subsequently, Fama (1991) has again divided the empirical results into three groups. In the remainder of the section we describe the three sub hypotheses and implication of each of them.

Weak-Form Efficient Market Hypothesis

The weak form EMH assumes that the share prices fully reflect all security market information contained in past price movements, which includes rates of return, trading volume, other market-generated information, block trades and so on. Because it assumes that current market prices reflect all the past returns and any other security market information, it implies that past rates of return should not have any relationship with future rates of return. Therefore, it is pointless basing trading rules on share price history, as the future cannot be predicted in this way. In other words, you cannot gain from using trading rule that decides whether to buy or sell the security based on the past data. The technical analysis (discussed in the subsequent chapter), which uses various trading rules cannot help the investors to gain the abnormal return from the market.

Semi-Strong Form Efficient Market Hypothesis

The semi-strong form EMH explains that share prices fully reflect all the relevant publicly available information. This hypothesis encompasses the weak form of hypothesis. This includes not only past price movements but also all the public information such as stock prices, earnings and dividend announcements, rights issues, technological breakthroughs, price to earnings ratios, dividend yield ratios, price to book value ratios, stock splits, news about the economy, political news, resignations of directors and so on. The semi-strong form of efficiency implies that there is no advantage in analysing publicly available information after it has been released, because the market has already absorbed it into the price. In other words, it can be said that investors who base their decisions on any important new information after it is public, should not derive above-average risk-adjusted profits from their transactions.

Strong Form Efficient Market Hypothesis

Strong form EMH assumes that the stock price fully reflect all the information from public and private sources. According to this hypothesis nobody has the monopolistic access to the information relevant to the investment. Therefore, this hypothesis contends that no group of investors should be able to derive above-average risk-adjusted return. It encompasses both weak as well as the semi-strong form EMH. Here the focus is on insider trading, in which a few privileged individuals, for example, directors are able to trade in shares, as they know more than the normal investor in the market. In a strong-form efficient market even insiders are unable to make abnormal profits and all the information is cost free and available to everyone at the same time.

SUMMARY

- A good understanding of the working of financial markets requires the knowledge of the meaning and types of risk and return, their relationship, and the process of valuation of securities.
- Although, strictly speaking, risk and uncertainty are not the same, they are regarded synonymous in practice. Risk can be defined as a chance that the actual outcome of investment may be less than the expected one.
- While the standard deviation or variance of return measures the security risk taken singly, covariance measures its riskiness as a part of portfolio.
- The investor faces many types of risk—default, financial, liquidity, maturity, call, interest rate, inflation, exchange rate, business and country risk.

- All these risks are broadly classified as systematic and unsystematic risks. The systematic risk is the risk associated with the fluctuations in the macroeconomic variables and the unsystematic risk is associated with the specific individual variables such as sales income, change in the leverage ratio and so on.
- Beta is a measure of relative sensitivity, volatility, risk of a security *vis-a-vis* the market risk. The security with a higher than 1 beta is more risky than the market, and the asset with a lower than 1 beta is less risky than the market.
- The rate of return or yield is the reward for investment. The total rate of return comprises periodic interest receipts and capital gain (loss). There are various concepts of rate of return (yield)—internal, bond, realised, expected, holding period, basic, current, redemption, dividend, earnings, nominal, real, gross, net and required return.
- There is a positive linear correlation between the expected return and risk. The securities are generally priced such that the high risk is rewarded with high return and the low risk is accompanied by low return. This relationship is known as the risk-return trade-off.
- The valuation of securities means professionally assessing their worth.
- There are many different concepts of value: book, going-concern, liquidation, market, intrinsic (present), and terminal value. Underlying the process of valuation is the idea of time value of money, which means that a rupee today in hand is worth more than a rupee available tomorrow (in future).
- The techniques of ascertaining the present value and terminal value of money are known as discounting and compounding, respectively.
- Basically, the value or price of any asset (firm) can be found by estimating all the future cash flows it is expected to generate, and by discounting them with the appropriate RRR (discount rate).
- The price or present value of the asset is inversely related to the timing of the cash flows and the level of discount rate.
- The level and changes in the bond or debenture price (value) are determined by expected interest receipts, maturity, bondholder's RRR, maturity value and changes in market interest rates.
- Bond price theorems explain the relationship between market interest rates and bond prices.
- The ordinary shares can be valued with the help of efficient market, technical and fundamental analyses. The present value and price-earnings approaches are the two parts of fundamental analysis, and the former primarily employs the dividend capitalisation model.
- Dividends or total net earnings are the foundation of CS valuation. The rate of growth of dividends (earnings) and the appropriate discount rate largely determine the CS value or price.
- CB is both a debt security and a CS. It has both a bond value and a conversion option value. It will always sell at a price which is greater than its bond value or conversion value, whichever is higher.
- The relative valuation techniques are useful for the comparative analysis of the various companies in the investment decision-making process.
- The overall EMH has been classified into three sub-hypotheses based on the information set involved: (1) Weak form of efficiency, (2) Semi-strong form of efficiency, and (3) Strong form of efficiency.

KEY TERMS

Systematic Risk
Time Value of Money
Arbitrage Pricing Model
Country Risk
Interest Rate Risk
Fundamental Analysis
Terminal Value
Yield to Maturity
Business Risk
Earnings Multiples
Intrinsic Value
Default Risk
Unsystematic Risk
Dividend Capitalization Model
Fama–French Three Factor Model
Yield
Inflation Risk
Technical Analysis
Going Concern Value
Dividend Yield
Financial Risk
Efficient Market Hypothesis
Capital Asset Pricing Model
Liquidity Risk
Market Risk
Relative Valuation Model
Book Value
Current Yield
Currency Risk
Revenue Multiples
Liquidation Value
Required Rate of Return

QUESTIONS

1. What is the meaning of risk? Define different types of risk briefly.
2. How would you define the rate of return or yield? What are the different types of yield used in the financial economics?
3. By giving the suitable examples, explain the risk-return trade-off.
4. What are the general principles of valuation of financial assets?
5. A ₹100 per value bond, bearing a coupon rate of 9 percent will mature after 8 years. What is the value of the bond, if the discount rate is 12 percent?
6. What is the meaning of perpetual security? How the present value of a perpetual security can be determined?
7. Discuss about the different approaches to common stock valuation.
8. Gulu manufacturing company is expected to grow at the rate of 7 percent per annum. The dividend expected on Gulu's equity share a year is ₹3. What price will you put on it if your RRR for this share is 14 percent?
9. The current dividend on a common stock of Gudu Limited is ₹4. Gudu is expected to enjoy a super normal growth rate of 20 percent for a period of 5 years. Thereafter the growth rate will fall and stabilise at 10 percent. Equity investors require a return of 15 percent. What is the intrinsic value of the common stock of Gudu Limited?
10. What is convertibility of a security? Explain the procedures, how the calculation of rate of return on CS can be carried out.
11. What is capital asset pricing model (CAPM)? Explain the various limitations of this model.
12. Arbitrage pricing model and Fama and French three factor models are the extension of CAPM model. Justify.

13. Discuss the various forms of efficient market hypothesis.
14. Analyse the different relative valuation models and how these are used for valuation of securities.
15. Discuss the key macro-economic variables and their impact on stock market.
16. What are the basic premises of technical analysis? Explain the 10 laws of technical analysis given by John Murphy.

An Overview of the Indian Financial System

3
CHAPTER

Learning Objectives

- **LO 1** Identify major changes that have occurred in the saving and investment trends
- **LO 2** Understand the overall development of financial institutions and financial markets in India
- **LO 3** Explain financial integration, financial volatility and financial inclusion
- **LO 4** Describe how the financial system is influenced by the risk-return-liquidity-preferences and confidence of investors
- **LO 5** Summarise the consolidation of business entities, through mergers and acquisitions
- **LO 6** Show how the development of financial market infrastructure has led to significant changes in the payment and settlement systems
- **LO 7** Review Demonetisation and its impact in India
- **LO 8** Determine various risks to financial system
- **LO 9** Review recent global financial market developments and undesirable elements of financial development

3.1 INTRODUCTION

The politico-economic background of the financial development in India has been determined by the nature of our mixed economic system. The objectives of this system with respect to growth, sectoral priorities, distribution have influenced the functioning and development of the Indian financial system (IFS). Some of the marked characteristics of Indian economy during the past 60 years are continuous inflation, increasing internal (fiscal) and external deficits, industrialisation, urbanisation, and significant structural transformation. Functioning within this context, all sectors of the economy, including the financial markets, have undergone significant changes. Further, there has been a close interaction between the financial and economic systems. This chapter presents a bird's eye view of the Indian financial system (IFS) after Independence. The major features of development of the IFS are discussed here, while that of the institutions and markets constituting

the system, are discussed in detail, in respect of their structure, growth, new practices and instruments, in the following chapters.

3.2 MACROECONOMIC DEVELOPMENTS

Table 3.1 presents some important indicators, which represent the growth of economy as a whole and also the development of financial sector. The real GDP growth rate has been around 7.5 percent in the recent years. The inflation rate measured through wholesale price index has declined more or less continuously during 1980–81 to 2014–15. The growth of money supply has been fluctuating over the period. Aggregate bank deposits and credits to GDP ratios have increased from 26.1 percent and 17.5 percent in 1980–81 to 68 percent and 52 percent, respectively, in the year 2014–15. Gross fiscal deficit, export and import as the percentage of GDP have shown the volatile trend during this period. Foreign capital inflow and foreign reserves have increased significantly. The equity market has also grown significantly as the ratio of total market capitalisation to GDP has increased from 136.8 percent in 2012–13 to 190.3 percent in 2014–2015.

Table 3.1 Macroeconomic indicators

Indicators	*1980–81*	*1990–91*	*2000–01*	*2010–11*	*2011–12*	*2012–13*	*2013–14*	*2014–15*
Growth rate of GDP at factor cost at constant price percent (Percent)	7.2	5.3	8.9	6.7	5.4	6.3	7.1	7.2
Gross savings/GDP	17.8	22.9	23.7	33.7	31.3	33.8	33.0	33.0
Gross capital formation/GDP	22.0	25.5	24.6	39.8	38.8	39.4	36.2	35.9
Inflation rate	18.2	10.3	7.2	9.6	8.9	7.4	6.0	2.0
Reserve money growth rate	17.4	13.1	8.1	19.1	3.6	6.2	14.4	11.3
Broad money growth rate	18.1	15.1	16.8	16.1	13.5	13.6	13.4	10.9
Aggregate deposits of commercial banks/GDP	26.10	33.80	44.40	66.90	66.90	67.80	68.40	68.30
Bank credit/ GDP	17.50	20.40	23.60	50.60	52.20	52.90	53.20	52.30
Gross fiscal deficit/GDP	6.0	9.1	9.2	6.9	7.8	6.9	6.7	7.0
Gross revenue deficit/GDP	–0.6	4.1	6.4	3.2	4.1	3.4	3.3	3.0
Export/GDP	4.6	5.8	9.9	15.0	17.0	16.8	17.1	15.5
Import/GDP	8.9	8.8	12.6	22.4	27.4	27.5	25.0	22.6
Foreign capital inflow/GDP	—	—	0.64	2.21	2.05	2.59	1.51	3.96
Foreign exchange reserves/ GDP	0.39	0.49	4.74	15.58	16.32	16.14	17.33	18.83
Market capitalisation of equity market/GDP	—	—	58.9	186.3	140.9	136.8	149.4	190.3

Source: RBI, Handbook of Statistics, SEBI, Annual Reports, Various Issues

3.3 INDIAN FINANCIAL SYSTEM AT PRESENT

A striking feature of the IFS is its prodigious growth in the past 60 years in terms of size, diversity, sophistication and complexity. Money supply, savings, bank deposits and credit, primary and secondary issues and so on have increased tremendously, the supportive factor being the continuous and high rate of inflation. The quantitative growth of the IFS has been accompanied by significant diversification and innovations in respect of an array of financial institutions, instruments and services. A large number of totally new institutions catering to almost every sector have been set up. As a result, today we have a highly diversified structure of financial institutions. Similarly, a large number of new financial instruments have come to be introduced, as a result of which we now have a fairly diversified portfolio of financial claims. Further, significant reorganisation, globalisation, privatisation, deregulation, automation, computerisation, changes in ownership, consolidation and mergers of financial institutions have been effected. A veritable financial revolution appears to have occurred in India, as elsewhere, over the years.

Tables 3.2 and 3.3 reflect the richness, diversity, complexity and well-developed nature of the IFS as it stands today. It lists all the major financial institutions, financial instruments and financial services which now exist in India. For the sake of clarity, only the major markets have been specifically mentioned. Although, as many details as possible, have been presented, Table 3.2 may not be regarded as fully exhaustive. It is to be noted that it mentions only the main types of financial institutions and instruments, while their sub-types are not mentioned. The commercial banks, cooperative banks, mutual funds, industrial debentures, preference shares, treasury bills, bank deposits, for example, have many sub-types. The student is advised to refer to the appropriate chapters to know the full details in this respect.

3.4 TRENDS IN SAVING AND INVESTMENT

LO 1

Identify major changes that have occurred in the saving and investment trends

At this point, the major changes that have occurred in the saving and investment trends should be noted. We may do so by studying either the net or gross saving and investment, the difference between the gross and net quantities being equal to fixed capital consumption allowance. Table 3.4 presents useful information on the volume and rates of total saving and investment and the sectoral distribution of saving. Table 3.4 shows that the contribution of the private corporate and public sectors together to the national savings has been around 30 percent during the recent year. Thus, India differs from many other countries where 'household savings play a minor role with corporations generally playing the dominant role in the accumulation of national surplus, with some tendency for governments to compensate where the corporations share falls below the median.[1] Gross domestic savings as a proportion of GDP has varied between 9.51 percent and 37.82 percent during 1950–1951 to 2014–2015.

[1]Newlyn, W.T., *The Financing of Economic Development*, Clarendon Press, Oxford, 1977, p. 12. This study of 32 countries showed that the median for the share of corporations was 50 percent and that for the government was 20 percent.

Table 3.2 Structure of the Indian financial system

Financial institutions			*Financial markets*	*Major financial instruments*	*Major financial services*
Regulatory	*Banking*	*Non-banking*			
Reserve Bank of India (RBI)	Commercial banks (i) Public sector banks (ii) Private banks (iii) Foreign banks	Post offices	Call money market	Ordinary shares	Credit rating
Securities and Exchange Board of India (SEBI)	Co-operative banks	Provident and pension funds	Collateral borrowings and lending market	Preference shares	Merchant banking
Insurance Regulatory Development Authority (IRDA)		Life Insurance Corporation of India (LIC)	Term money market	Convertible shares	Underwriting
Pension Fund Regulatory Development Authority (PFRDA)		General Insurance Company (GIC)	Treasury bills market	Debentures	Leasing
		Other private insurance companies	Commercial papers market	Treasury bills	Hire purchasing
		Mutual funds	Certificate of deposits market	Government-dated bonds	Deposit insurance
		Industrial Finance Corporation of India (IFCI)	Government-dated Securities market	Commercial bills	Rediscounting
		Export and Import Bank of India (EXIM Bank)	Corporate bond market	Certificate of deposits	Refinancing
		National Bank for Agriculture and Rural Development (NABARD)	Public sector unit bonds market	Commercial papers	Brokerage
		Deposit Insurance and Credit Guarantee Corporation (DICGC)	Stock market	ULIPs post office saving schemes	Factoring
		Export Credit and Guarantee Corporation (ECGC)	Derivatives market	Trade credit	Loan syndicating
		Shipping Credit and Investment Company of India (SCICI)	Foreign exchange market	Financial derivatives	Depository services
		Tourism Finance Corporation of India (TFCI)		Commodity derivatives	Market making
		Credit Rating Information Services of India Limited (CRISIL)		FDI	
		Credit Analysis and Research (CARE)		American depository receipts	
		Investment Information and Credit Rating Agency of India Limited (ICRA)		Global depository receipts special drawing rights	

Table 3.3 Indian financial institutions and markets at a glance

Items	*2006–07*	*2014–15*
1. Scheduled commercial banks (SCBs) (No.)	179	148
1. Public sector banks (PSBs) (No.)	27	25
2. Private sector banks (No.)	26	26
3. Foreign banks (No.)	29	42
4. Regional rural banks (No.)	133	56
5. Scheduled co-op. banks (No.)	69	73
6. Scheduled urban co-op. banks (No.)	53	54
7. Scheduled State co-op. banks (Nos.)	16	19
8. Bank branches (No.)	71839	125672
9. Population per office (in thousands)	15	10.3
10. Deposits of scheduled commercial banks (₹ billion)	26119.33	88989.01
11. Credits of scheduled commercial banks (₹ billion)	19311.89	64998.29
12. Per capita deposits of scheduled commercial banks (₹)	23468	68576
13. Per capita credits of scheduled commercial banks (₹)	17355	50089
14. Mutual funds (No.)	40	47
15. Non-bank financial companies (NBFCs) (No.)	466	605
16. Stock exchanges (No.)	23	18
17. Foreign institutional investors (No.)	997	1710
18. Venture capital funds (No.)	45	201
19. Listed companies (No.)	6049	5805
20. Foreign capital inflows (US $million)	190	226103
21. Average daily BSE turnover in 2015 (₹ crore)	3797	3518
22. Average daily NSE turnover in July 2015 (₹ crore)	12797	17818
23. Life Insurance Companies (No.)	16	24
24. General Insurance Companies (No.)	15	24

Source: RBI, annual reports, basic statistical returns; SEBI, annual reports; IDRA annual reports.

Table 3.4 Ratio of savings and investment to GDP (at current market prices percent)

Year	*Public sector savings*	*Private sector savings*	*Household savings*	*Total savings*	*Total capital formation*
	1	*2*	*3*	*4*	*5*
1950–51	2.07	0.89	6.55	9.51	9.31
1960–61	3.19	1.57	6.83	11.59	14.27

(*Contd.*)

1970–71	3.40	1.41	9.51	14.32	15.15
1980–81	4.10	1.56	12.11	17.77	19.17
1990–91	1.82	2.59	18.53	22.93	26.03
2000–01	–1.34	3.72	21.30	23.68	24.26
2005–06	2.41	7.51	23.53	33.44	34.65
2006–07	3.56	7.88	23.15	34.60	35.66
2007–08	4.99	9.40	22.42	37.82	38.11
2008–09	0.96	7.41	23.64	32.02	34.30
2009–10	0.16	8.35	25.18	33.69	36.48
2010–11	2.56	7.95	23.51	34.02	36.84
2011–12	1.30	7.18	22.33	30.81	35.00
2012–13	2.15	9.35	19.93	31.45	36.63
2013–14	1.99	10.44	18.18	30.61	32.28
2014–15	0.92	11.11	18.67	32.30	33.54

Source: RBI, Handbook of Statistics, Various Issues.

The savings-investment gap has been negative in most of the years. The trends in public sector savings have been fluctuating throughout the period and it has been negative in the year 2000–2001. The private corporate sector savings has increased continuously up to the year 2007–2008, but after that it has declined and showing a fluctuating trend. It could be due to the low profitability of the companies during the financial crisis. The household sector savings has increased steadily during 1950–1951 to 2009–10, but since 2010–2011 it has shown a declining trend. The average investment ratio has increased from 9.31 percent in 1950–1951 to 38.11 percent in 2007–2008. It could be due to moderate tax rates, coupled with buoyant sales growth, which increased the internal accruals of the corporate sector. During the period 2009–2015 it has shown a fluctuating trend. The improved investment climate and strong macro fundamentals also led to an upsurge in foreign direct investment. The higher investment was able to absorb the domestic savings and also generated an appetite for absorption of capital inflows from abroad. The household sector has been the only surplus sector in India, while the investment of private corporate and public sectors has always far exceeded their respective savings. A detailed study[2] of the pattern of financing of investment of different sectors has shown that the dependence of the private corporate and public sectors on the household sector and financial institutions for the purpose of financing their investment has increased substantially over time.

3.4.1 Household Sector Saving

Since the household sector is the major saving and surplus (saving-investment) sector, a study of its saving, financial investment[3] and borrowing trends will throw further light on the nature and pattern of financial development in India; it would also enable us to understand better certain concepts widely used in discussions on finance. Tables 3.5 and 3.6 show the saving and borrowing trends of the household sector. In order to

[2]Bhole, L.M., *Impacts of Monetary Policy*, *op. cit*., pp. 48–58.

[3]The term investment really refers to the act of purchasing physical or real assets for the purpose of utilising them in the productive activity. However, layman and even knowledgeable persons quite often use that term in the case of purchases of financial assets also. In order to distinguish the meanings, we would call the latter financial investment.

accelerate economic development, it is necessary to not only increase the rate of savings but also to hold them in appropriate forms. If savings are held in the form of currency and/or if they are used mainly to buy non-productive physical assets such as gold and non-agricultural land and so on, they would either remain idle or they would be used unproductively or be wasted. The *financialisation of saving*, that is, saving in the form of financial assets other than currency, is, therefore, regarded as one of the requirements for faster economic growth. Item 2 in Table 3.4 shows that financialisation of savings in India has been increasing continuously. The increase during the 1970s and 1980s has, however, been quite significant. Further, item 3 in the same table shows that the share of currency in the total financial saving declined substantially between 1955–1956 and 1975–1976 and after that period it has shown a tendency to fluctuate around a low level during the period 1980–2015. Thus, we can say that the financialisation of saving, which is conducive to their activation or active mobilisation for the purpose of productive investment, has to a great extent taken place in India.

Table 3.5 Saving behaviour of the household sector 1970–1971 to 2014–2015

Items	*1970–71*	*1980–81*	*1990–91*	*2000–01*	*2005–06*	*2009–10*	*2010–11*	*2011–12*	*2012–13*	*2013–14*	*2014–15*
	1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*
1. Gross financial savings	30.93	45.57	43.82	48.00	47.29	45.35	40.72	34.58	32.20	36.80	30.89
2. Currency	16.82	13.41	10.61	6.32	8.93	9.79	12.70	11.39	10.88	7.96	10.54
3. Bank deposits	35.73	45.80	31.88	38.27	45.48	40.22	50.77	55.22	56.13	60.51	46.63
4. Non-banking deposits	3.18	3.12	2.18	1.21	0.09	1.87	0.47	2.18	1.68	2.38	2.61
5. LIC fund	9.81	7.55	9.50	13.68	14.29	26.25	19.46	19.79	17.77	16.04	19.50
6. PF and pension fund	23.22	17.51	18.94	20.55	10.60	13.12	13.07	14.26	12.10	10.64	16.11
7. Claims on govt.	4.98	5.88	13.38	15.76	14.92	4.39	2.74	–2.85	–0.69	0.59	0.07
8. Shares and debentures	3.22	3.40	8.44	4.50	5.80	4.53	0.16	–0.47	4.27	2.52	4.18
9. UTI	0.66	0.26	5.84	–0.38	–0.08	0.00	0.00	0.00	0.00	0.00	0.00
10. Trade debt	2.37	3.08	–0.77	0.07	–0.04	–0.18	0.63	0.47	0.31	0.37	0.32
11. Financial institutions (3 + 5 + 6 + 9)	69.42	71.12	66.16	72.12	70.29	79.59	83.3	89.27	86.00	87.19	82.24

Note: All the figures are percentages as given below:

(i) Item-1(Gross financial savings) is represented as a percentage of 'Gross savings'

(ii) All other items are as percentage of item-1 (Gross financial savings)

Sources: RBI, Handbook of Statistics, Various Issues.

3.4.2 Trends in Institutionalisation and Securitisation

What has been the trend in India of the *institutionalisation* or intermediation of saving, of the relative importance of direct and indirect securities, of the growth of equity culture and *securitisation*? Table 3.5, item 11 shows that the level of institutionalisation of saving, that is, the proportion of savings held in the

form of financial assets issued by financial institutions (indirect or secondary securities) has been quite high, that it has significantly increased during the period 1955–1956 to 1975–1976, that it declined somewhat by 1995–1996, and that it has again increased to about 70 percent in 2005–2006, further it has increased to more than 87 percent during 2012–2015. By contrast, the trends of shares of direct or primary securities such as non-banking deposits, claims on the government and corporate securities in the total financial savings (Items 5, 8 and 9 in Table 3.5) were quite diverse in different sub-periods.

The percentages of the claims on the government and the corporate securities to the total financial saving of the household sector have clearly fluctuated or have been quite unstable during 1950–1951 to 2014–2015. Currently, there is a view that India, like the United States and other Western countries, is now going through the process of disintermediation and securitisation. It has been argued that as a result of the deepening of the financial markets due to the growth of UTI, mutual funds, LIC, deposits with companies in private and public sectors, debenture issued by public sector companies, the growth of activity on the stock market and introduction of a large number of new tax-saving small saving instruments, there has been a shift from currency, bank deposits and liabilities of other financial intermediaries to direct securities. A decline, particularly in the share of bank deposits in the total financial savings is taken to be indicative of disintermediation. The share of shares and debentures has slightly increased in the year 2014–2015.

Our discussion in the previous two paragraphs shows that in the long run, it is the phenomenon of institutionalisation of saving and financing investment, and not of securitisation, that has been predominant in India. A decline in the share of only the banks may not reflect disintermediation. The share of all financial institutions in total savings had declined slightly in 1995–1996, but it has increased again in 2014–2015. Similarly, the increase in new issues of industrial securities does not necessarily mean disintermediation because it has been accompanied by the growth of ownership of these securities by financial intermediaries such as UTI, mutual funds, GIC, LIC and so on.

3.4.3 Household Sector Liabilities

An important aspect of the IFS which is not usually given the attention it deserves in the discussions of Indian finance is the level, structure and implications of financial liabilities of the household sector. More often than not, while discussing the saving behaviour of the household sector, the attention tends to be concentrated only on the gross figures. It is important to note that the household sector in India is a surplus sector not only in the sense that its savings exceed its investment but also in the sense that the excess of saving over investment substantially exceeds its financial liabilities. In short, the household sector in India is a net surplus sector. Unlike the affluent societies in the West where the household, like other sectors, is under the burden of heavy debts because of the practice of sales finance, hire-purchase finance, instalment credit, credit cards (i.e. the phenomenon of the 'bill collector', in the language of J K Galbraith) and so on, in India the financial liabilities of the household sector are quite small and have not increased much over the years. In fact, they have increased at a much slower pace than the financial savings of the household sector.

Table 3.6 reveals that, while during the period 1950–2051 to 2014–2015 the ratio of financial liabilities to national income increased only slightly from 0.7 percent to about 2–3 percent, the ratio of net financial savings to national income varied between 0.9 to 18 percent. This table further shows that banks are the predominant lenders to the household sector. Other lenders are the government, financial institutions and co-operative non-credit societies. It is noteworthy that while after 1970 the importance of the government as

lender to the household sector has declined, that of other financial institutions in this regard has increased to some extent. In the recent past, in percentage terms, while the bank advances to the household sector have declined, loans from other financial institutions to it have increased quite significantly. This perhaps signifies a beginning of the coming of the 'bill collector'. In any case, it should be noted that the households, families and the individuals are not responsible for any increase in the debt burden and the risk of insolvency of the financial system in India—at least not at present. It is the government and business organisations that have been responsible for putting India into the debt trap.

Table 3.6 Financial savings and liabilities of household sector 1970–1971 to 2014–2015

Year	*GFS/GDP*	*TFL/GDP*	*NFS/GDP*	*BA/TFL*	*LFI/TFL*	*LAG/TFL*	*LANCCS/TFL*
	1	*2*	*3*	*4*	*5*	*6*	*7*
1970–71	4.43	1.24	3.19	86.12	6.42	11.67	–4.23
1980–81	8.10	2.34	5.75	88.16	5.18	4.30	2.33
1990–91	10.05	1.58	8.47	80.16	12.45	6.59	0.78
2000–01	11.37	1.46	9.91	80.04	14.91	4.15	0.88
2005–06	15.82	4.98	10.84	95.54	4.57	–0.26	0.15
2006–07	17.80	6.58	11.22	96.83	3.31	–0.23	0.08
2007–08	15.49	3.77	11.71	95.38	4.61	–0.13	0.13
2008–09	12.91	2.91	10.01	94.58	5.38	–0.12	0.15
2009–10	15.28	3.14	12.14	95.57	4.37	–0.07	0.12
2010–11	13.85	3.57	10.29	96.77	3.16	–0.03	0.093
2011–12	10.66	3.14	7.52	96.50	3.12	0.27	0.091
2012–13	10.69	3.32	7.36	93.36	6.50	0.05	0.07
2013–14	10.63	3.04	7.59	85.39	14.36	0.18	0.05
2014–15	10.18	2.56	7.62	81.30	18.44	0.18	0.06

Note: The full form of the abbreviation used in the table is as follows: GFS: Gross financial saving, TFL: Total financial liabilities, NFS: Net financial saving, BA: Bank advances, LFI: Loan and advances from other financial institutions, LAG: Loan and advances from government, LANCCS: Loan and advances from co-operative non-credit societies and GDP: Gross domestic product.

Sources: RBI, Handbook of Statistics, Various Issues.

3.5 OVERALL DEVELOPMENT OF FINANCIAL INSTITUTIONS IN INDIA

LO 2

Understand the overall development of financial institutions and financial markets in India

Over the post-independence period the financial sector in India has grown by manifold in terms of the varieties of financial institutions. Number of regulatory bodies has increased. Apart from RBI, the new regulatory institutions such as, SEBI, IRDA and PFRDA have been established to regulate, supervise and develop the different financial markets and institutions operating in India. SEBI is responsible for regulating the Indian stock markets and mutual funds. IRDA

and PFRDA are responsible for the regulation and development of insurance companies and pension funds, respectively. The number of commercial banks has increased and their operations in the rural sector have also increased by many folds, which help in the process of financial inclusion. Growth of private and foreign banks in India has made the banking sector more competitive and efficient. The growth of co-operative banks is not very impressive in the context of IFS. The functions of post office have changed significantly. Now the post offices are offering many services and issue many instruments (both short-term and long-term) which increase the importance and volume of small savings in India. The New Pension System (NPS) has changed the face of pension sector in India. As only 11 percent of the population is under the pension scheme in India, the aim of the New Pension Scheme is to include as many as people into the scheme to make their social security stronger in the future. The insurance sector has grown by many folds as the private companies are allowed to do the insurance business in India. In the recent years, many private companies are carrying out the insurance business in India. During the past 15 years, the sector has grown in size and penetration. Deregulation has resulted in more diversified insurance product offerings, with stress on marketing and distribution strategies. The importance of mutual funds has increased due to the entry of private companies into this sector. Mutual funds increase the alternative modes of investments for the common man through which the people can invest their money to maximise their returns. Number of non-banking financial companies such as loan companies, hire purchase companies and investment companies have increased and their role in the development process has also risen. The non-banking statutory institutions, such as NABARD, EXIM Bank, IFCI and so on have also expanded their business to make the financial system more developed, efficient and competitive. The financial institutions are now able to provide many financial services, such as credit rating, factoring, underwriting, merchant banking, banking, risk management and so on.

A number of important changes have recently taken place in the role and policy of the RBI. The issue of its autonomy has come to the forefront and it has been seemingly granted a little higher degree of autonomy. The emphasis has shifted from the direct to indirect techniques of credit control and credit distribution; the cash reserves ratio (CRR) and statutory liquidity ratio (SLR) have been significantly reduced; bank rate technique has been revived, almost all the interest rates have been deregulated and steps have been taken to make effective use of open market operations (OMOs) for credit control. Repo rate has become major policy instrument of the monetary policy as a part of liquidity-adjustment facility. The content of the promotional role of the RBI has undergone a shift of emphasis from 'institutional development' to 'financial system stability, soundness and viability'. Given the complexity and pace of the financial innovations, and difficulties in detecting mismanagement and frauds, its monitoring and supervising function has become more constant, difficult and costly. As it has been pointed out, now 'central banks can rest assured of an interesting life in which they will continue to have to deal not only with the challenge of fighting inflation but also with the challenge to the health of the financial system created by financial innovation, political pressures, frauds, mismanagement and investor exuberance, all within the context of globalising economy'.[4]

3.6 OVERALL DEVELOPMENT OF FINANCIAL MARKETS IN INDIA

The financial markets are broadly categorised as money market, stock market, debt market, derivatives market and foreign exchange market. Every market has two segments, that is, the primary market and the secondary

[4]Fischer, Stanley, ''Financial System Soundness'', *Finance and Development*, March 1997, p. 17.

market. In India, the primary market in terms of all types of market is not developed in comparison to the other developed economies. The secondary market for stocks is reasonably developed, but the primary segment is totally dormant. The secondary markets in commercial bills, treasury bills, mortgages and debentures are either non-existent or highly underdeveloped. Although a secondary market in government securities does exist, it is confined to only a few institutions and organisations. The number of participants in different markets is small, and the competition in financial markets is usually far from keen. The markets for financial claims in India have always been narrow and they are more so now. They are dominated by institutional investors. The markets for government securities and treasury bills have always been confined to a few financial institutions. But now the corporate securities market has also been so confined. The institutional ownership of corporate securities and even units of mutual funds and their operations on stock exchanges have greatly increased. A large part of corporate securities cannot really be called direct or primary securities in the real sense of those terms. The derivatives market is comparatively new and not much developed in India. Even now the secondary market trading of the derivatives is not very active and developed in Bombay Stock Exchange.

3.7 FINANCIAL INTEGRATION

LO 3

Explain financial integration, financial volatility and financial inclusion

The financial system has now become much more integrated than ever before. The dividing lines between the so-called 'organised' and 'unorganised' sectors, between the 'busy' and 'slack' seasons, are getting increasingly imperceptible. The factors that are behind greater integration are as follows: (a) the government entry in a very big way in the wholesale trading of a large number of commodities, (b) an unprecedented expansion of the network of rural branches of banks, (c) a transformation in the perception of the role of financial institutions just mentioned, and (d) the evolution of financial institutions as multifunction (mixed) institutions. The banks and term-lending financial institutions have become more integrated through such methods as the use of 'participation certificates'; the adoption of 'participation or consortium approach' to granting loans and offering financial services, such as underwriting and guaranteeing; and their activities in the markets for call loans, commercial bills and so on.

The process of integration has progressed during 1990s. The money market, government securities market and foreign exchange market have facilitated faster liquidity pass through in recent years. The complementarity or interlinkages between markets has, however, not yet always resulted in high level of integration of yields in them. For example, interest rates on certificates of deposits have been usually higher than those on fixed deposits with banks. Similarly, the yield rates on government papers and those on other debt instruments are not still well integrated on account of, *inter alia*, narrow investment base and lack of depth in secondary markets. Recent financial market reforms in India have enabled a greater integration of various segments of the financial market, reducing arbitrage opportunities, achieving higher level of efficiency in market operation of intermediaries and increasing efficacy of monetary policy in the economy. Growing integration of financial markets beginning 2000 could be gauged from cross-correlation among various market interest rates.

Table 3.7 Correlations among major financial markets

	RREPO	*Call*	*TB 91*	*TB 364*	*Yield 10*	*CDs*	*CPs*	*FR 1*	*FR 3*	*FR 6*	*EXCH*	*LBSES*
April 1993 to March 2000												
RREPO	1.00											
Call	0.35	1.00										
TB91	0.44	0.61	1.00									
TB364	0.32	0.40	0.90	1.00								
Yield 10	0.04	0.46	0.57	0.49	1.00							
CDs	0.30	0.32	0.45	0.41	0.38	1.00						
CPs	0.39	0.54	0.81	0.75	0.57	0.71	1.00					
FR1	0.27	0.80	0.45	0.33	0.46	0.47	0.63	1.00				
FR3	0.28	0.68	0.47	0.32	0.56	0.58	0.65	0.97	1.00			
FR6	0.30	0.61	0.48	0.36	0.60	0.62	0.68	0.91	0.98	1.00		
EXCH	0.03	–0.04	–0.23	–0.38	–0.06	–0.19	–0.31	–0.25	0.12	0.13	1.00	
LBSES	–0.37	–0.10	–0.24	–0.34	–0.05	–0.40	–0.28	0.32	–0.28	–0.30	0.35	1.00
April 2000 to March 2015												
RREPO	1.00											
Call	0.86	1.00										
TB91	0.86	0.95	1.00									
TB364	0.84	0.92	0.99	1.00								
Yield 10	0.79	0.89	0.96	0.98	1.00							
CDs	0.78	0.91	0.94	0.93	0.93	1.00						
CPs	0.85	0.90	0.96	0.95	0.92	0.96	1.00					
FR1	0.63	0.67	0.61	0.55	0.54	0.62	0.68	1.00				
FR3	0.69	0.63	0.60	0.54	0.52	0.66	0.77	0.97	1.00			
FR6	0.70	0.65	0.63	0.55	0.57	0.68	0.73	0.95	0.99	1.00		
EXCH	0.31	0.24	0.18	0.11	0.04	0.27	0.30	0.63	0.65	0.69	1.00	
LBSES	–0.33	–0.25	–0.22	–0.16	–0.14	–0.29	–0.35	–0.58	–0.63	–0.73	–0.71	1.00

Notes: TB91: 91-day Treasury Bills Rate, Yield 10: 10-year government securities yield, Call: Inter-bank call money rate (weighted average), FR1: 1-month forward exchange premia, FR6: 6-month forward exchange permia, LBSES: Natural logarithm of BSE Sensex, RREPO: Reverse repo rate, CPs: Commercial paper rate, TB364: 364 Treasury Bills Rate, CDs: Certificate of deposit rate, FR3: 3-month forward permia, EXCH: Exchange rate of Indian rupee per US dollar. Correlations are based on monthly data.

The correlation structure of interest rates reveals several notable features of integration of specific market segments (Table 3.7). First, in the money market segment, there is evidence of stronger correlation among interest rates in the more recent period 2000–2015 than the earlier period 1993–2000, suggesting the impact of policy initiatives undertaken for financial deepening. The enhanced correlation among interest rates also indicates improvement in efficiency in the operations of financial intermediaries trading in different instruments. Second, the high correlation between risk-free and liquid instruments, such as, treasury bills, which serve as benchmark instruments, and other market instruments, such as, certificates of deposit and commercial papers and forward exchange premia, underlines the efficiency of the price discovery process.

Third, the sharp improvement in correlation between the reverse repo rate and money market rates in the recent period implies enhanced effectiveness of monetary policy transmission. Fourth, the high degree of correlation between long-term government bond yield and short-term treasury bills rate indicates the significance of term structure of interest rates in financial markets. Fifth, the correlation between interest rates in money markets and 3-month forward premia was significantly high, indicating relatively high horizontal integration. Integration of the foreign exchange market with the money market and the government securities market has facilitated closer co-ordination of monetary and external sector management. The impact of foreign exchange market intervention can be carefully coordinated with monetary management encompassing constant monitoring of the supply of banking system liquidity and an active use of OMOs to adjust liquidity conditions. Sixth, the equity market appears to be segmented with relatively low and negative correlation with money market segments.

There has certainly been an increase in the extent of participation by India in the international financial markets. This has occurred through flow of funds to India from abroad, on many levels as follows: government to government; international financial institutions to government; international financial institutions to domestic financial institutions; funds of non-resident Indians (NRI), and from the issues made by the Indian financial institutions and public and private corporate sector units in the private capital markets abroad. The foreign business of domestic commercial banks and foreign banks' business in India has increased. The number of foreign collaborations in India and Indian collaborations and joint ventures abroad also have contributed to the establishment of linkages between India and foreign financial markets. As will be discussed in Chapters 21 and 22, India is now mobilising growing amounts of foreign capital through euro issues, euro instruments, external commercial borrowings and so on. The globalisation has exposed the IFS to abrupt contagious crises, that is, abrupt changes in asset prices, major bouts of volatility in foreign exchange markets, debt markets and stock market. For example, the Indian stock market also suffered from a sharp decline in share prices on October 28, 1997 because of the stock market crash in the US, Japan, Australia and so on. As a part of the influence of international finance on the IFS, it is necessary to make reference to the possible growth of derivatives markets in India. Many people are demanding that derivative securities should also be introduced in India at the earliest. These securities are also known as hybrid securities which blend the characteristics of debt and equity securities, and financing with their help is known as mezzanine financing. The implications of the use of these instruments will be discussed fully in Chapter 20. It may be noted here that the use of options, warrants, swaps and so on tends to blur the conventional legal and financial distinction between debt and equity capital, which may require changes in bankruptcy laws, income-tax laws and other relevant laws.

3.8 FINANCIAL VOLATILITY OR INSTABILITY

Stability has always been one of the three major goals of development, the other two being, growth and social justice. From this point of view, the economists and policy makers have always been aware of the importance of stability and they have strived to achieve it. However, in the recent past, far more attention than in earlier years is being paid to the discussion and understanding of, and policy for, stability. The most central banks are currently devoting far more time and efforts to the issue of financial instability than before. This has been particularly so after the currency and financial crises in Mexico, East Asia and Southeast Asia during 1990s. The policy of deregulation, liberalisation and globalisation, and the consequent growing integration of the

world financial markets have been accompanied by an increase in instability in specific financial markets as well as entire economies. It is now well-recognised that maintaining stability in financial markets is one of the prerequisites for the smooth and efficient functioning of the market economy.

The terms such as instability, volatility and crises are often consciously or unconsciously used interchangeably. Instability means changeability, sudden or easy changeability in value, waveringness or fickleness. To be volatile means lively, gay, changeable, and transient. The distinction may be made between economic instability, monetary instability and financial instability.

- Monetary instability is said to be the instability of general prices, while financial instability refers to the quick and large amount of changes in financial markets and institutions.
- Economic instability is a broader term and it refers to marked ups and downs in the economic system as a whole in respect of monetary, financial and real variables. The term earlier used for economic instability was the business cycles. These different types of instabilities are closely interrelated and impact each other.
- Financial instability comes in the way of taking decisions rationally, it engenders uncertainty which tend to distort allocation of resources, it reduces the willingness of economic units to enter into medium-term and long-term contracts. It has destabilising wealth effect on the economy

As said above, instability or volatility has increased at present. In India, there has been excess and destabilising volatility in the stock market. The banks have been sucked into the stock market volatility, causing crisis. Bank funds far in excess of prudential limits have fuelled the artificial boom, and a few banks are now stuck up with huge exposures. The prices and turnover in call market, foreign exchange market and so on have been moving up and down in far wider ranges than before.

The stock markets in the world also are experiencing increasing volatility, and the present levels of volatility, as adjudged by the experts, are more than any time since the Great Depression. The Keynesian advice that investment in equities should be made permanent or long-term has been thrown to the winds currently as never before. The winners on the stock market are those who get in and get out quickly while making small yet frequent profits. Traders and hedge funds now dominate market thriving on turmoil at the expense of ordinary investors. Large numbers of ordinary buy-and-hold investors are deserting the markets.

The factors which have caused the markets to become more volatile are many, listed as follows:

- Desertion by buy and hold investors, predominance of hedge funds, and hair and trigger traders
- Computerised tools have made it easier to trade large amounts of stocks continuously
- Increasing political uncertainty is unnerving the market
- Round the clock trading has reduced wait-and-watch reflex on the part of investors
- The existence of asymmetric information problem
- Runs on financial intermediaries
- Herd behaviour on the part of investors
- Excessive speculation
- Fluctuations in the prices of real assets
- Changes in exchange rate more than justified by changes in economic fundamentals
- Instability of commodity prices.

In the recent years, the importance of financial stability emanates from four major trends in the financial systems, which have become evident in recent years. These are as follows: (i) an imbalance of growth between the financial sector and the real economy; (ii) a change in the mode of financial operations due to financial deepening (credit/debit cards, and so on); (iii) the emergence of a globally integrated financial system, and (iv) an evolution of sophisticated financial instruments and attendant risks. Consequently, the sources of crises have multiplied, necessitating the coordination of a number of authorities, both within and outside the country.

A stable financial system promotes efficient allocation of economic resources, geographically and over time. In a broader perspective, financial stability analysis focuses on a wide range of issues covering macroeconomic performance of the economy, monetary stability, regulation and supervision of banking and financial institutions and any other risk that may influence the financial system. Very often these aspects happen to be interrelated in a complex manner. Macroeconomic performance of the economy influences the ability of the firms/individuals to abide by the contracts in financial transactions. The soundness of the financial system on the other hand is crucial for providing support to the strong macroeconomic dynamics.

For practical purposes, financial stability covers a number of interrelated components, which include infrastructure (payment and settlement system, legal framework and accounting practices), institutions (banks, securities firms and institutional investors) and markets (stock, bond, currency, money and derivatives). Financial stability does not require that all parts of the financial system operate in most efficient manner all the time. A stable financial system rather has the ability to resolve imbalances through self-corrective mechanism before they precipitate a crisis.

Central banks have tailored the design of financial sector reforms to country-specific situations, taking cognisance of the threats to financial stability. The relevant considerations are as follows: (i) the recognition that complement each other quite well financial stability and macroeconomic stability; (ii) the pace of reforms to be adopted, that is, whether a shock therapy approach or a more cautious and gradualist strategy; (iii) deciding the optimal sequencing of reforms in case the gradualist approach is adopted; and (iv) the credibility of reforms. In this regard, the issue of credibility is interrelated with the choice of the pace of reform. A graduated pace wins credibility since it avoids disruptions and roll-backs in the short run, while building a consensus in favour of continuing reforms in the medium to long run.

3.8.1 Assessment of Financial Stability

The Financial Sector Assessment Programme (FSAP) is a joint initiative of the International Monetary Fund (the Fund) and the World Bank (the Bank) that began in 1999. It attempts to assess the stability and resilience of financial systems in member countries. An FSAP enables identification of the scope for strengthening resilience and fostering financial stability in a country and is designed to promote smoother integration with global markets. India first participated in an FSAP in 2001 and also associated with independent assessments of standards and codes by the Fund/Bank since then. In September 2005, the IMF and the World Bank jointly brought out a handbook on financial sector assessment. This detailed the techniques and methodologies for FSAP that could, *inter alia*, serve as a reference point for countries themselves to undertake self-assessments.

The IMF is developing new applications for stress tests and other risk-assessment models to help identify and address financial system's vulnerabilities in member countries. This work aims at enhancing the quality of quantitative analysis, performed in the context of the Financial Sector Assessment Program, supporting

technical cooperation on risk-based supervision and Basel III implementation and facilitating offsite surveillance of national and global financial systems, and, hence, IMF surveillance more broadly. Among the specific areas in which the IMF has been active are the further development of credit risk modelling; analysis of the 'second-round effects' of shocks—both interactions within the financial sector and feedback between the financial sector and the real economy; and expansion of existing approaches to liquidity risk modelling.

'Stress testing' to adverse macroeconomic shocks is an important tool in assessing financial stability. A stress test is performed to measure the sensitivity (of the portfolio of assets and liabilities of an individual institution or a financial system) to changes in one of the risk factors, such as, interest rate or exchange rate. It provides an estimate of the change in the value of the portfolio due to a sudden change in the risk factors. The stability of a financial system depends on a large number of factors. The first step in a stress-testing process is to identify the important risk factors and understand what the informal state for the financial system is. After identifying the potential shocks to the financial system, the next step is to develop a macroeconometric model that can be used to understand the behaviour of the system with respect to the main vulnerabilities. Once the model is developed, the idea is to decide upon the time horizon for measuring the shock, the variables subjected to the shock and the size of the shock. Finally, the shocks need to be mapped into their impact on the balance sheet of financial institutions. The key indicator used for measuring the interest rate risk is duration. Duration is a measure of the percentage change in the value of the portfolio for a unit change in the interest rate and is a good measure only for small changes in the interest rate. Stress testing normally involves large changes in interest rates. Therefore, in addition to duration, convexity should also be included in the calculations. In practice, often immaturity gap analysis, which is a simplified measure of interest rate sensitivity, is used by banks in place of duration analysis.

Exchange rate risk is the impact of changes in exchange rate on the value of assets and liabilities of financial institutions. The change in net open position due to a change in exchange rate can help determine the sensitivity of the position to exchange rate risk. The net open foreign exchange position is relatively easy to measure and, therefore, banks may be in a position to manage the exchange rate risk to a great extent. Credit risk is the risk that counterparties will default on their contractual obligations. The data that are required for credit risk stress testing relate to different categories of performing loans and nonperforming loans (sub-standard, doubtful and loss). A set of different types of variables can be used for stress testing of credit risk, such as changes in the price of collateral, increase in non-performing loans (NPLs) and increase in provisioning ratio. Stress tests can be performed for other types of risks (liquidity risk, commodity risk, equity price risk) in a similar manner. Stress tests can also be performed for the second-round effects by using contagion models. These models estimate the impact of failure of one institution on the other institutions in the system. These types of models have already been applied to interbank markets but can also be adopted for other types of markets.

Overview: Financial Sector Assessment Report in India[5]

To make an assessment of financial stability conditions in India, a Committee on Financial Sector Assessment (CFSA) was constituted by the Government of India in September 2006 (Chairman: Dr. Rakesh Mohan; Co-Chairman: Dr. D. Subbarao). The central plank of the assessment is based on three mutually

[5]GOI, RBI, (2009) Report on India's Financial Sector an Assessment.

reinforcing pillars, viz., (i) financial stability assessment and stress testing; (ii) legal, infrastructural and market development issues; and (iii) assessment of the status and progress in implementation of international financial standards and codes. To assist in the process of assessment, the CFSA has constituted four advisory panels for the assessment of (i) financial stability and stress testing; (ii) financial regulation and supervision; (ii) institutions and market structure; and (iv) transparency standards. The advisory panels will prepare separate reports covering each of the above aspects. To provide the panels with technical notes and background material, the CFSA had set up technical groups consisting of officials representing mainly regulatory agencies and the government in all the above subject areas which have progressed with technical work in respective areas. The CFSA would publish Advisory Panel reports and also its own report. The major indicators of financial instability are volatility of return on assets of banks and companies, non-performing assets of the banks, capital adequacy ratio, volatility of call money rate, volatility of the returns of the stock indices, volatility of exchange rates and so on.[6]

Indicators of financial soundness, including the results of stress tests of credit and market risks, suggest that the banks are healthy and robust. The liquidity ratio analysis of the banking system has, however, shown a few concerns that need to be addressed. In recent years, competition has increased across bank groups as also within the public sector. The Reserve Bank has had in place a scheme of prompt corrective action (PCA) since December 2002, which is applicable to scheduled commercial banks (except RRBs). The scheme is in place to undertake 'structured' and 'discretionary' actions against those banks that exhibit weaknesses in certain pre-determined financial and prudential parameters. The capital adequacy ratio of the commercial banks is higher than the regulatory limit. The financial performance of the co-operative sector has been found to be less than satisfactory.

There are two broad categories of NBFCs, namely, NBFC-deposit taking (NBFC-D) and NBFCs-non-33 deposit taking (NBFC-ND). NBFCs-D have a high CRAR, low NPAs and comfortable return on assets. The CFSA observes that there has been a decline in the number of housing finance companies (HFCs). The key indicators of the life insurance segment show a reasonably comfortable position as regards to solvency and capital adequacy. However, the solvency ratio of the largest life insurance company is just at the stipulated regulatory minimum. However, there are no concerns as regards asset quality, profitability, and liquidity. There is a general trend to increase link-based business in the life sector. The non-life segment also displays comfortable solvency. But earnings and profitability as also liquidity are areas of some concern. The high ratio of net claims to net premiums point to the need for better quality control in respect of underwriting new business, better risk management and increasing reinsurance.

The last two decades have seen tremendous growth in Indian equity markets. There has been significant improvement in the market and settlement infrastructure, and major strides have been taken in areas of risk management which received a major impetus after the setting up of SEBI as the market regulator. The turnover in both the cash and derivatives markets, as well as market capitalisation and returns from stock markets, increased considerably until end-2007. But since early 2008 there has been considerable volatility, with a downward bias in market capitalisation and price-to-earnings ratios, largely due to global financial developments. The foreign exchange market in India is one of the fastest growing across countries, as is evident from both the spot and derivatives segments. Apart from increased turnover, the low and stable bid-ask spread of the INR/USD market is an indicator of the deep liquidity and efficiency

[6]The detail data and analysis have been provided in the chapters 8, 15, 18, 19 and 20.

of the market. However, since September 2008, considerable volatility has been witnessed in the market. In recent times, and consequent to the various steps taken to develop the government securities market, there has been tremendous growth in both the volume and liquidity in this segment. Trade associations, such as Fixed Income Money Market Dealers Association (FIMMDA) have also played a crucial role in the development of the government securities market. The money market continues to be liquid with a low and stable bid-ask spread. A better trading and settlement infrastructure coupled with the introduction of financial market reforms have led to a decline in money market volatility. In the derivatives segment, the swap market (especially overnight index swaps) has been the active segment and is used by banks as well as other entities to manage their interest rate risk more than any other instrument. The notional principal outstanding in respect of interest rate swaps has increased. Interest rate deregulation has made financial market operations more efficient, but it has also exposed the participants to increased risks. In India, the corporate bond market has failed to take off so far, largely because of lack of buying interest, poor transparency and an absence of pricing of spreads against the benchmark yield curve.

3.9 FINANCIAL INCLUSION

Financial Inclusion is the process of ensuring access to appropriate financial products and services needed by all sections of the society in general and vulnerable groups such as weaker sections and low-income groups in particular at an affordable cost in a fair and transparent manner by mainstream institutional players.[7] In majority of the developing countries, access to finance is now being perceived as a public good. [8] The concept of financial inclusion has a special significance for a growing economy like India as bringing the large segment of the productive sectors of the economy under formal financial network could unleash their creative capacities besides augmenting domestic demand on a sustainable basis driven by income and consumption growth from such sectors. From the perspective of the Reserve Bank of India, greater participation by all the economic agents in the financial system makes monetary policy more effective and, thereby, enhancing the prospects of non-inflationary growth. It also reduces reliance on the informal sector which tends to dent the impact of monetary policy decisions. The extent of financial exclusion in India is found to be higher as compared with many developed and some of the major emerging economies. The wide extent of financial exclusion in India is visible in the form of high population per bank branch and low proportion of the population having access to basic financial services such as, savings accounts, credit facilities, credit and debit cards.[9]

3.9.1 Measures of Financial Inclusion

Financial inclusion can be measured in two ways. One is, countering the exclusion from the payment system, that is, not having an access to a bank account. The second is, countering the exclusion from the formal financial services. The Indian approach in recent years has been to establish the basic right of every person to have access to a bank account. This approach is based on the fundamental principle of 5A's of

[7]Address delivered by Shri S.S. Mundra, Deputy Governor, Reserve Bank of India at the BRICS Workshop on Financial Inclusion in Mumbai on September 19, 2016.

[8]A good is considered a public good if it meets the conditions of 'non-rivalness' in consumption and non-excludability.

[9]Keynote address delivered by Shri Harun R. Khan, Deputy Governor, Reserve Bank of India at the symposium on 'Financial inclusion in Indian Economy' organised by the Indian Institute of Public Administration, Bhubaneswar on June 30, 2012.

ensuring *adequacy* and *availability* of financial services to all sections of the society through the formal financial system covering savings, credit, remittance, insurance, and so on, and, at the same time, increasing *awareness* of such services and ensuring *affordability* and *accessibility* of the appropriate financial products through a combination of conventional and alternative delivery channels and technology-enabled services and processes. Broadly, the policy approach adapted to financial inclusion in India can be divided into two categories (i) the *minimalist approach*, and (ii) the *expanded approach*. The minimalist approach for financial inclusion focuses on the provision of a bouquet of basic financial products and services, including thrift, credit, remittance and payment facilities for the vulnerable and financially excluded sections. Banks have been urged to include products, such as, savings-cum-overdraft product, remittance product, pure savings product and entrepreneurial credit product while pursuing the objective of greater inclusion. The expanded approach for financial inclusion, on the other hand, focuses not only on the provision of the basic banking products but also other important ancillary financial products, such as, general insurance, health insurance, micro-pension, mutual fund, finance for affordable housing, and so on. The expanded bouquet of financial inclusion would also entail focus on consumer protection and education, particularly financial literacy for the new entrants to the formal financial system.

One common measure of FI is the percentage of adult population having bank accounts. One of the broad measures of the level of financial inclusion is the Financial Inclusion Index. This index is based on three basic dimensions of an inclusive financial system—banking penetration, availability of the banking services and usage of the banking system.[10] Banking penetration is definitely the most critical parameter for measuring the depth financial inclusion and is measured as a ratio of bank accounts to the total population. The second parameter, availability of banking services provides an indication to the number of bank outlets available per 1000 people to deliver financial services. The bank outlets may include the brick and mortar branches, ATMs, business correspondents and so on. The third parameter seeks to determine the usage of banking services going beyond mere opening of accounts. Therefore, this is evaluated on the basis of outstanding deposits and credits. Accordingly, the volume of outstanding deposit and credit as proportion on the net district domestic product is used for measuring this dimension.

3.9.2 Reasons of Financial Exclusion in India

There are varieties of reasons for financial exclusion in India. In remote, hilly and sparsely populated areas with poor infrastructure, physical access itself acts as a deterrent. From the demand side, lack of awareness, low incomes/assets, social exclusion and illiteracy act as barriers. From the supply side, distance from branch, branch timings, cumbersome documentation and procedures, unsuitable products, language, staff attitudes are common reasons for exclusion. All these result in higher transaction cost apart from procedural hassles. On the supply side, absence of technology was a major impediment as it restricted expansion of banking services to far-flung areas of the country comprising of 600 thousand plus villages. In the absence of technology, developing a cost-effective delivery model also remained a challenge. On the other hand, the ease of availability of informal credit sources makes these popular, even if costlier. The requirements of independent documentary proof of identity and address can be a very important barrier in having a bank account especially for migrants and slum dwellers.

[10]Sarma, M. (2008) 'Index of financial inclusion' Working Paper No. 215, Indian Council for Research on International Economic Relations.

3.9.3 Initiatives for Financial Inclusion[11]

RBI took initiatives, such as, laying down priority sector lending requirements for banks, Lead Bank Scheme, establishment of Regional Rural Banks (RRBs-1975-76), Service Area Approach (1989), Self-Help Group-Bank Linkage Programme (1989–90), setting up of local area banks, and so on, all aimed at making available benefits of banking services to the masses. Since 2006, RBI has adopted a planned and structured approach to address the issues of financial inclusion. RBI's approach has been to focus both on the demand as well as on the supply side.

- Institutionalisation of the framework of banking correspondents (BCs) has been a major step towards enhancing access of banking services.
- RBI advocated a combination of 'brick and mortar' structure with 'mouse and click' technology for extending financial inclusion in geographically dispersed areas.
- It is mandated to open physical bank branches in all villages above a population of 5000 in a phased manner. We feel this would also enable banks to not only provide quality financial services but also timely support to their BC network.
- The banks were mandated to open at least 25 percent of their new branches in unbanked rural centres.
- In order to ensure that persons belonging to low-income group, both in urban and rural areas do not encounter difficulties in opening bank accounts, the know your customer (KYC) procedures for opening accounts has been simplified for those persons with balances not exceeding ₹50,000 and credits in the accounts not exceeding ₹1,00,000 in a year.
- RBI also encouraged banks to adopt a structured and planned approach to financial inclusion with commitment at the highest levels through preparation of board-approved financial inclusion plans (FIPs). The first two phases of FIPs implemented over 2010–2013 and 2013–2016 were interspersed with the implementation of PMJDY by the Government of India during 2014–2015.
- RBI has granted in-principle approval to some entities to set up differentiated banks namely 'small finance banks' (SFBs) and 'payments banks' to further the cause of financial inclusion in the country. Other than serving as vehicles for savings, SFBs and payments banks are expected to enhance the supply of credit to small business units, small and marginal farmers, micro and small industries and other entities in the unorganised sector and enable provisions for cost-efficient remittance services in a secured technology-driven environment, respectively.
- Considering the strong linkage between financial inclusion and the payment systems, RBI has taken several steps. Some of these include encouraging use of mobile banking, pre-paid instruments in the form of digital wallets and mobile wallets, operationalisation of the Aadhaar bridge payment system (ABPS) and Aadhaar-enabled payment system (AEPS) and so on.
- A scheme for graded certification/training programme for BCs is also being introduced to enable the BCs with a good track record and advanced training to handle complex tasks that are beyond deposits and remittances.
- For the demand side intervention, banks in India have been mandated to set up financial literacy centres (FLCs) for extending financial literacy.

[11]Address delivered by Shri S.S. Mundra, Deputy Governor, Reserve Bank of India at the BRICS Workshop on Financial Inclusion in Mumbai on September 19, 2016.

- The rural self employment training institutes (RSETIs) have been set up by various banks all over the country at the district level. The key objective of RSETI is 'Short-term training and long-term hand-holding with assistance to credit linkage for trainees'.
- An important driver for enhancing the demand side of financial inclusion is direct benefit transfer (DBT). If entitlements under various state-sponsored schemes start directly flowing into the bank accounts of individuals under the DBT mode, it can act as a catalyst to encourage saving habit leading to build up of investment and seed capital for availing productive credit.
- RBI had set up an Expert Committee on Medium Term Path for Financial Inclusion under ED (Deepak Mohanty) which was tasked to draw up a medium-term and long-term roadmap for FI. The committee has made about 80 actionable recommendations which are being pursued by RBI.
- RBI has reconstituted the high-level inter-institutional Financial Inclusion Advisory Committee (FIAC) for undertaking a continuous review of the policies on FI; monitoring of the progress in Financial Inclusion and the financial literacy; evaluation of its impact through conduct of study/surveys and for preparation of a national strategy for financial inclusion.

The number of banking outlets in villages went up from 67,694 in March 2010 to 5,86,307 in March 2016 after RBI permitted appointment of BCs and laid out a roadmap for spreading banking services in rural India through a mix of bank branches and BC outlets. In addition, the number of urban locations covered through BCs has also surged from 447 in March 2010 to 1,02,552 in March 2016. The Basic Savings Bank Deposit Accounts (BSBDAs) have gone up from 73 million in March 2010 to 469 million as on March 31, 2016. Under the PMJDY alone, until June 1, 2016, 220 million accounts have been opened with an approximate balance of ₹384 billion. There were 47.31 million small farm sector credit accounts and 11.3 million small non-farm sector credit accounts with an outstanding of ₹5130.7 billion and ₹1493.3 billion outstanding, respectively, as on March 31, 2016. The total number of transactions in BC-ICT accounts which were around 26 million during 2010-11 has increased to 826.81 million as on March 31, 2016.

3.10 CONSUMER CREDIT

India is experiencing the rise of service economy and the culture of 'living off debt'. In the recent past, the conservative middle-class debt-averse Indians are increasingly borrowing for spending on conspicuous consumption. The low rate of inflation, soft interest rates, media bombardment, Internet access, greater availability of choice in buying consumer durables due to globalisation have contributed to this new culture. Banks, NBFCs have liberalised access to credit for the consumers. Consumers are now in a position to buy everything from automobiles to computers through instalment and hire-purchase credit. The spending volumes and patterns are undergoing a drastic change. The manufacturers, financiers, banks and NBFCs are coming together to make attractive credit offers to the potential buyers. They have come up with new schemes such as zero interest scheme, 100 percent finance scheme, instantaneous loan-approval scheme, step-up and step-down repayment (monthly instalment increases or decreases each year) scheme, and front-ended and back-ended (higher repayments at the beginning and higher repayments towards the end) scheme, which have helped to expand consumer finance market (CFM) in India also. The consumer loans are secured and unsecured; the former include home loans, auto loans, loans against securities, while the latter include credit cards, personal loans and so on. The official estimates of the size of CFM are not available. The receivables in the economy are growing at a high rate. The expansion in CFM has been accompanied by the need for risk

management or containing delinquencies and losses in repayment of loans. Banks have developed their own techniques to manage risk such as using past repayment of previous loan and credit card ownership to gauge the financial credibility of the borrower. The consumer financier has to deal with operational risks such as, frauds also.

3.11 RETAIL INVESTORS IN INDIA

LO 4

Describe how the financial system is influenced by the risk-return-liquidity-preferences and confidence of investors

The retail investor is one of the most important links in the working of financial system. The health and efficiency of the financial system are significantly influenced by the risk-return-liquidity-preferences and confidence of investors. The latest survey conducted in India by SEBI-NCAER reveals the following profile of the retail investors in India.

- The estimated number of investor households in India is 24.5 million who constitute about 11 percent of total households.
- The percentage of investors is nearly 20 in urban areas while it is much lower (6 percent) in rural India.
- The strong preference of investors is towards mutual funds (43 percent) and secondary markets (22 percent). In urban areas, 41 percent of investors invest in mutual funds and 21 percent secondary markets, whereas, 46 percent rural population chooses mutual funds and 22 percent secondary markets.
- There is a significant magnitude of small savers among all households. Eleven to 25 percent of all households save in post office savings schemes.

3.11.1 Investors Behaviour in Urban India

- In urban India, a majority of households do not participate in financial markets. The distribution of participation is not spatially even. For instance, 55 percent of all investors are found in the western region.
- The allocations are still in avenues such as commercial bank deposits and real estate.
- Nearly 72 percent of all households treat commercial banks and insurance schemes as their primary choice for savings.
- Only 21.25 percent households prefer to invest in secondary markets.
- About 40 percent investors are of the opinion that in the book-building process, the prices of the IPO entering the market may not be transparent and the retail investors do not have sufficient knowledge about SEBI's role.

3.11.2 Investors Behaviour in Rural India

- Households in villages that are close to urban centres significantly participate in markets, particularly in the mutual fund market.
- A significantly larger percentage of rural households across income and asset classes as well as demographics are risk-averse compared to their urban counterparts. Since rural households are relatively more risk averse, the time horizon for savers and investor is medium term (3–5 years).
- The level of savings increases with educational attainment and asset holdings.

3.12 CONSOLIDATION OF INDIAN FINANCIAL SYSTEM

LO 5

Summarise the consolidation of business entities, through mergers and acquisitions

Consolidation of business entities, through mergers and acquisitions, is a world-wide phenomenon. The numerous mergers and acquisitions all over the world, including in India, in the real as well as in the financial services sector, appear to be driven by the objective of leveraging the synergies arising from the process of merger and acquisition. However, such structural changes, particularly in the financial system, can also potentially have public policy implications. The consolidation efforts in the Indian banking sector can be broadly placed, as per the nature of the entities involved and of the mergers, into several categories viz., (a) voluntary amalgamation between private sector banks; (b) compulsory amalgamation of a private sector bank; (c) merger between public sector banks; (d) merger of a non-banking financial company (NBFC) with a private sector bank; and (e) merger of a housing finance subsidiary with the parent public sector bank.

3.13 DEVELOPMENT OF FINANCIAL MARKET INFRASTRUCTURE

LO 6

Show how the development of financial market infrastructure has led to significant changes in the payment and settlement systems

Rapid and on-going innovations in technology and communication infrastructure and its integration with the various modes of payments have led to significant changes in the payment and settlement systems. While leading to greater efficiency in the payment and settlement systems, these innovations have also necessitated increased emphasis on integrity of the various systems to maintain financial stability. The Reserve Bank, therefore, continued to take measures to provide efficient and integrated payment and settlement systems in the country during post-liberalisation period while simultaneously taking steps to mitigate risks.

A new settlement mechanism in government securities through settlement banks is being formulated in order to facilitate direct access of NDS and NDS-OM participants who do not maintain current accounts but maintain SGL accounts with the Reserve Bank. This new system would facilitate phasing out of current accounts of non-banks and non-PD entities with the Reserve Bank. The CCIL has developed the required software changes and has also entered into arrangements with three banks to function as settlement banks for the present. The new arrangement is in operation since May 2008. Access to the order matching segment on NDS (NDS-OM), which was launched in August 2005, was initially allowed to commercial banks and primary dealers and later to other NDS members, such as, insurance companies, mutual funds and large provident funds for their proprietary deals. Access to NDSOM was extended to other entities maintaining gilt accounts with NDS members, that is, banks and PDs through the constituents' subsidiary general ledger (CSGL) route from May 2007.

Initially, permission was accorded to deposit-taking NBFCs, provident funds, pension funds, mutual funds, insurance companies, cooperative banks, RRBs and trusts. With effect from November 2007, the facility has also been extended to the systemically important non-deposit-taking NBFCs (NBFCs-ND- SI). These entities can place orders on NDS-OM through direct NDS-OM members, that is, banks and PDs, using the CSGL route. Such trades are settled through the CSGL account and current account of the NDSOM members. Certain segments of investors such as other non-deposit-taking NBFCs, corporates and FIIs do not have access to NDS-OM through the CSGL route. It was announced in the annual policy statement of May 2004 that a clearing and settlement arrangement through the CCIL was being considered to strengthen the over-

the-counter (OTC) derivatives market and mitigate the risks involved. With some of the underlying issues having been addressed with the enactment of the 'Payment and Settlement Systems Act, 2007', a clearing and settlement arrangement for OTC rupee derivatives is proposed to be put in place. The modalities for operationalising the clearing and settlement system for the OTC rupee interest rate derivatives would be worked out in consultation with the CCIL.

Table 3.8 shows the status of the payment system indicators of India. Overall, the payment and settlement systems registered robust growth during 2015–2016, with volumes and value growing at 49.5 percent and 9.1 percent, respectively, in comparison with the previous year. The efforts made by the Reserve Bank for migration to electronic payments are reflected in high volumes witnessed under various electronic payment systems. At end-March 2016, the national electronic funds transfer (NEFT) facility was available through 1,30,013 branches of 172 banks, in addition to business correspondent (BC) outlets. In March 2016, NEFT processed the largest ever monthly volume of 129 million transactions. During 2015–2016, 786 million transactions valued at around ₹2.4 trillion were carried out through credit cards, while 1.2 billion transactions valued at ₹1.6 trillion were carried out through debit cards. Prepaid payment instruments (PPIs) recorded 748 million transactions valued at ₹488 billion. The number of authorised payment system operators stood at 71 comprising PPI issuers, cross-border money transfer service providers, white label ATM (WLA) operators, ATM networks, instant money transfer service providers and card payment networks besides the Clearing Corporation of India Limited (CCIL) and the National Payments Corporation of India (NPCI).

Table 3.8 Payment system indicators

Items	*Volume (Millions)*			*Value (₹ Billion)*		
	2013–14	*2014–15*	*2015–16*	*2013–-14*	*2014–15*	*2015–16*
A. SIFMIs	83.7	95.7	101.4	1355822	1426488	1545672
A.1 RTGS	81.1	92.8	98.3	734252	754032	824578
A.2 TFMC	2.6	3.0	3.1	621570	672456	721094
B. Retail Payments	3627.4	4620.9	6945.2	143748	154129	177752
B.1 Paper Clearing	1257.3	1195.8	1096.4	93316	85439	81861
B.2 Electronic Clearing	1108.3	1687.4	3141.6	47856	65366	91408
B.3 Card Payments	1261.8	1737.7	2707.2	2575	3325	4484

Notes: (1) SIFMIs: Systemically important financial market infrastructures (SIFMIs), (2) Real time gross settlement (RTGS) system includes customer and inter-bank transactions only. (3) Total financial markets clearing includes CBLO, government securities clearing and forex clearing. (4) Settlement of collateralised borrowing and lending obligation (CBLO), government securities clearing and forex transactions are through the Clearing Corporation of India Ltd. (CCIL). (5) Total Paper clearing includes CTS, MICR clearing, non-MICR clearings (6) Consequent to total cheque volume migrating to the cheque truncation system (CTS), there is no magnetic ink character recognition (MICR) cheque processing centre (CPC) location in the country as of now. (7) Total electronic clearing includes ELSDR, ECSDR, NEFT, immediate payment services (IMPS) NACH. (8) Total card payments include credit cards, debit cards and prepaid payment instruments. (9) The figures for cards are for transactions at point of sale (POS) terminals only. (10) The National Automated Clearing House (NACH) system was started by the National Payments Corporation of India (NPCI) on December 29, 2012, to facilitate inter-bank, high volume, electronic transactions which are repetitive and periodic in nature. (11) TFMC: Total financial markets clearings, ECS: Electronic clearing service, DR: Debit, CR: Credit and NEFT: National electronic funds transfer. (12) Figures in the columns might not add up to the total due to rounding off.

Source: RBI, Annual Report, 2015–16, p. 95.

3.14 DEMONETISATION IN INDIA AND ITS IMPACT

LO 7
Review Demonetisation and its impact in India

Demonetisation is the act of stripping a currency unit of its status as legal tender. Demonetisation is necessary whenever there is a change of national currency. The old unit of currency must be retired and replaced with a new currency unit.[12] The success of demonetisation depends upon the implementation of the process, time period and honesty of the people.

It has both positive and negative implications and it varies across the time, that is, short-term and long-term. All the positive and negative implications are as follows:

- The basic objective of demonetisation is to reduce the amount of black money in circulation and to increase the tax revenue of the government as a significant portion of the cash on hand generated by economic transactions that are not reported to tax system can be brought into the system efficiently. This process increases the tax to GDP ratio and as the money gets accounted and more taxes are collected, it might lead the government to reduce tax rate in the future.
- Demonetisation has also largely declined the high-valued transactions, such as, precious metals and land. This would result in lower inflation which in turn let the central bank to reduce interest rates. Higher forced savings deposits and lower interest rate create opportunities for more investment in the future. The other argument is that as these savings are not voluntary savings, it will be converted into active liquid cash when full-fledged new currency supply takes place. This means that new savings with banks is only transitory or short-term deposit. It may be encashed by the savers at the appropriate time. It is not necessary that demonetisation will produce big savings in the banking system in the medium term.
- Money in cash form lying idle does not create any return, but money in the bank creates enough investment opportunities in the market which also help to increase the return of the investors.
- Demonetisation also helps in the process of equitable distribution of income once the hoarded money comes to the formal mainstream financial institutions, such as, banks.
- Demonetisation acts as a liquidity shock as it suddenly stops the availability of the currency. Lack of the availability of the currency leads to reduction of the household consumption, which will have the negative impact on the growth process in the short run. The process works in the following way:
- Consumption ↓ Production ↓ Employment ↓ Tax Revenue ↓ Growth ↓
- The daily wage earners, other labourers, small traders and so on who reside out of the formal economy use cash frequently. These sections will lose income in the absence of liquid cash. Cash stringency will compel firms to reduce labour cost and thus reduce income to the poor working class.

3.15 RISKS TO FINANCIAL SYSTEM

(i) Risks from Rising Oil Prices and Increasing Inflationary Pressures

LO 8
Determine various risks to financial system

The impact of oil prices can be assessed both in the short and the long run. In the short run, internationally, the literature mentions three sources of oil price inflation. These are (i) gap in supply and demand of oil and speculation-induced disturbances as evidenced from strong reaction to news; and (ii) large positions by traders and significant

[12]http://www.investopedia.com/terms/d/demonetisation.asp

increase in inventories. In contrast, the long-term factors include (i) increasing demand from rapidly growing economies like India and China; (ii) improvements in energy efficiency; (iii) uncertainty associated with exploration and production of oil; and (iv) geopolitical factors.

The consequences of oil price inflation have largely been adverse particularly to the oil-importing countries. In general, output loss, inflationary spirals and adverse balance of payments outcomes have been much more severe on low-income oil-importing countries than the oil-importing industrial countries. Moreover, the expansionary effect of oil price shocks in oil-exporting countries has generally been much less than the contractionary impact in oil-importing countries, resulting in a slowdown in global growth. The increasing cost of production resulting in adverse terms of trade, consequent to the oil shock in the oil-importing countries, also erodes international competitiveness of countries with significant degree of openness and dependence on imported oil as a critical input. Oil price shock also tends to deteriorate the fiscal balance if the government absorbs the rise in international oil prices, and pass-through to domestic consumers is staggered and incomplete. The end result in most of the episodes of oil shock has been significant loss of output in the short run and general level of welfare in the long run. A recent analysis estimates that a supply-induced doubling of prices would raise inflation rate in emerging Asia by as much as 1.4 percentage points above the baseline (BIS, 2007). The inflation effect would be larger if oil importers had difficulty in financing the resulting current account deficit, and also if subsidies, that had hitherto limited energy price increases, were assumed to be further reduced or eliminated.

Central banks face the dilemma of growth-inflation trade-off more acutely during episodes of oil price increase. It is important to properly assess the sources of inflation and state of inflation expectations in order to find the appropriate policy response (Bernanke, 2004). However, recent economic history suggests greater success for central banks in stemming inflationary pressures arising out of oil shocks. This is in contrast to the 1970s and the early 1980s which witnessed wage-price spiral and consequent detrimental impact on growth on account of monetary tightening due to oil prices. A strong correlation seems to exist between international oil price and domestic oil price. Spikes in oil prices accounted for a major source of overall inflation in many countries.

Several studies have attempted to empirically measure the impact of rise in crude oil prices in the international markets on domestic inflation and output. In the international perspective, a study by the IMF (2000) found that a sustained US $5 per barrel increase in the price of oil leads to 1.3 percentage points increase in inflation after a year and reduces annual GDP growth by 0.1 percentage points. In the Indian context, Bhattacharya and Bhattacharyya (2001) concluded that a 20 percentage points shock in oil price leads to a 1.3 percentage point increase in inflation in other commodities at its peak, while growth in output decelerates by about 2.81 percentage points and recovery starts to take place approximately after a year. The Mid-term Review of Annual Policy Statement for the year 2004–05 of the Reserve Bank, released in October 2004, indicated that in the absence of policy intervention, every US dollar increase in crude oil prices could potentially add 15 basis points to WPI inflation as a direct effect and another 15 basis points as indirect effect.

(ii) Rising International Interest Rates and Global Turnaround in the Credit Cycle

The increased degree of financial market integration across various segments of the market as well as countries has made it is easier for contagion of crisis to travel from one part of the world to the other in a quick manner. This has enhanced the vulnerability of financial systems globally and calls for additional vigilance by financial sector regulators and supervisors in the movement of international finance. A major

development engaging attention all over the globe in the recent period has been the turmoil in financial markets in the United States and Europe and the sudden plunge in credit market confidence triggered by the US sub-prime mortgage crisis. The key elements of the current crisis have been the complex nature of the derivatives used; the high degree of leveraging; the underestimation of risk pervading financial markets; the surprisingly sizeable exposures of large financial institutions to some of the debt instruments and derivatives in question and the speed of contagion. The recent turbulence in the international financial markets was accentuated by the leverage enjoyed by banks and some other investment vehicles, especially hedge funds.

(iii) Hedge Funds

These are assorted investment pools which use an array of hedging techniques to reduce portfolio volatility. Stulz (2007) defines hedge funds as 'unregulated pools of money managed by an investment advisor, the hedge fund manager, who has a great deal of flexibility'. Managers of hedge funds follow complex investment strategies to leverage portfolio size through sophisticated derivative contracts. The economic function of a hedge fund is the same as the function of a mutual fund. In both the cases, fund managers are entrusted with money from investors with a hope of receiving back initial investment and a healthy return. The hedge funds, however, often make use of complex investment strategy involving 'long' and 'short' positions for hedging their investment against adverse market movements. These funds are typically organised as private partnerships and often located offshore for tax and regulatory reasons. Hedge funds are largely restricted to large-scale investors. Such a restricted access facilitates these funds to bypass the registration and other regulations. Historically, they have attracted high net worth individuals and institutional investors. An array of institutional investors investing in hedge funds has widened significantly in recent years to include pension funds, charities, universities, endowments and foundations (Ubide, 2006).

The general *modus operandi* of hedge funds is to identify an asset (that is mispriced) and devise hedges for their position so that they benefit from the correction of the mispricing but are unaffected by anything else. There is, however, a possibility that not all the positions taken by hedge funds are hedged because of high costs or intrinsic difficulties in hedging against some risks. As the hedge funds basically seek inefficiencies in the market and try to correct them, they can play an important role in financial markets in terms of bringing security prices closer to fundamental values. The efficiency of hedge funds is ensured through payment to fund managers, which is often linked to increase in investors' wealth. In addition, managers typically invest significant amounts of their own capital in the fund, which aligns their interests with that of the investors and discourages reckless risk taking.

In 1949, the first hedge fund is considered to have been established by A.W. Jones in the United States by combining two investment tools, viz., short-selling and leveraging. Though the hedge fund industry is smaller compared with mutual funds, it has increased in a significant manner. The assets managed by hedge funds which were less than 4 percent of the assets managed by mutual funds at the end of 1993, increased to 10 percent by 2005. It is estimated that in 2006 more than US $1 trillion was invested in hedge funds (Stulz, 2007). Though hedge funds, on an average, have low return volatility as compared to an investment in stock market, they can lose their money/capital very rapidly. Around 10 percent of hedge funds die every year (Stulz, 2007). Thus, the hedge funds are a source of concerns for regulators in terms of investor protection, risks to financial institutions, liquidity risks and excess volatility risks. A hedge fund may die because of withdrawal of funds by investor due to significant losses or it may disappear where fraud or misreporting becomes apparent. Hedge funds pose a risk to financial institutions through their credit exposures in the form

of borrowings, security transactions and counterparty in derivative trades. Because of leverage, a hedge fund might get in trouble, if its assets experience a sharp drop and the market for these assets lacks liquidity, so that fund cannot exit its positions. The collapse of large hedge funds, in particular, may have serious implications for financial institutions having exposure to these funds. The liquidity risk arises from the ability of hedge funds to move out of trades quickly when prices turn against them. The problem could be serious if too many funds have set up the same trade. Hedge funds may also create excess volatility risks by making trades leading to overreaction of prices to diverge from fundamental values.

The risks discussed above are crucial from the financial stability point of view. According to Eichengreen and Mathieson (1999) from the perspective of international markets, a vital question about hedge funds is whether they destabilise foreign exchange markets, through steering herd behaviour and by joining a generalised move, against a weakening currency. Empirical evidence is inconclusive regarding the role of hedge funds in creating destabilising conditions. Hedge funds have been charged to have played a pivotal role in the 1997–98 crisis in emerging markets. Eichengreen and Mathieson (1999), however, conclude that the positions taken by hedge funds were too small to create turmoil in the region. Moreover, the *baht* was the only Asian currency for which the hedge funds collectively took significant short positions. The spread of currency instability to other Asian countries appears to have caught the hedge funds off guard. According to market participants, the main short sellers in Indonesia, Malaysia and the Philippines were money centre, commercial and investment banks and domestic investors, who were better able to short due to their superior access to inter-broker markets and domestic credit. The huge losses of Long-Term Capital Management (LTCM), a large hedge fund in the United States, were, however, recognised by a consortium of banks as a potential disruption to financial markets which raises legitimate concerns about the activities of hedge funds in general, as well as the proper role that regulators should play with respect to those activities (SEBI, 2004).

The large-scale withdrawal by the so-called 'carry trade', in which investors borrowed at low rates in Japan and lent at higher rates in the United States and some other countries, also resulted in sharp increase in volatility in foreign exchange markets. Withdrawal by FIIs on a large scale may also have implications for the domestic liquidity conditions and interest rates with attendant implications for the cost of borrowing by all the market participants, including the government.

(iv) Risks from Global Financial Imbalances

The estimates by the IMF indicate that narrowing the ratio of current account deficit to GDP of the United States by one percent would require a real depreciation of US dollar in the range of 10–20 percent. The sustainability of the growth process in the surplus countries would require rebalancing of aggregate demand with a pickup in domestic demand. The disorderly adjustments of global financial imbalances have serious implications for the global economy and financial markets. Such an event could be caused by large portfolio adjustments resulting in sharp adjustment in exchange rates, liquidity shifts, interest rates and adjustment in assets prices. The changes in asset prices will influence capital flows which in turn would have impact on liquidity conditions and financial stability.

India, like many other emerging market economies, could be adversely affected by the sudden unwinding of global financial imbalances. However, the impact could be different on different sectors such as the government, the corporate sector and the banking system. (i) The Government of India does not raise resources from the international capital market to finance its fiscal deficit. There could however be the spill-over impact of external developments on domestic interest rates. To the extent there is a rise in domestic

interest rates, there could be an increase in the cost of borrowings raised by the Government. However, most of the outstanding debt is at fixed rates and not on floating rates. Therefore, the rise in the borrowing cost of the government will be incremental. (ii) Spreads on corporate debt might widen suddenly due to a shift in investor confidence in the global financial markets. Indian corporates raise resources from the international capital market, as alluded to earlier. The cost of borrowings for corporate may also go up due to hardening of interest rates in the domestic market. Thus, corporates may be affected to the extent interest rates firm up in the domestic market, depending on their exposure to debt relative to other liabilities. (iii) Banks in India hold substantial investments in government and other fixed-income securities. However, most of such investments are in 'held to maturity' category. Thus, increase in domestic interest rates would entail marked-to-market losses only on the small part of investments. Also, the banking sector, on the whole, is comfortably placed with CRAR of around 12 percent. At individual banks level, 79 out of 82 banks have CRAR above 10 percent. Thus, banks in India, in general, have the resilience to withstand some rise in interest rates. (iv) Banks in India have also been extending credit for investment in the asset market. Like many other economies, asset prices in India have also risen sharply in recent years. Should there be a sharp decline in asset prices, banks' balance sheets would be exposed to credit risk. Increase in interest rates in general could impact housing prices and expose the balance sheet of the households to interest rate risk, leading to some loan losses for banks. Having said that, the banking sector's exposure to housing loans, at present which is not very large in relation to their overall portfolio and banks, in general, have maintained healthy margins while lending to the housing sector. Therefore, the impact on banks' balance sheets might be muted. (v) Disorderly readjustment of currencies could also have implications for the real sector. Significant readjustment of currencies and rise in interest rates could adversely impact the spending in advanced economies, which in turn, could slow down global growth. This would entail a reduction in export opportunities and reduction in investment demand for India. While readjustment of currencies may have some impact, the Indian economy is largely domestic demand-driven. Also, India's export basket is fairly well diversified. As such, the overall impact on the Indian economy may not be significant.

(v) Risks of Asset Price Adjustments

Assets price movements in the global financial markets have assumed greater importance in recent years, particularly, from the financial stability point of view. The large institutional investors are acquiring cross-border assets denominated in foreign currencies in increasing volumes. Though the assets denominated in foreign currencies are subject to additional risk of exchange rate variation, international investors buy these assets because of higher returns. The returns could vary across countries due to differential interest rates or faster appreciation of assets in some countries. The differential interest or appreciation rate sometimes outweighs the exchange rate risk, or in some cases exchange rates may move favourably for international investors in respect of some currencies. In such cases, the flow of capital in higher return countries could increase in an unsustainable manner and lead to further rise in assets prices in these countries to the levels inconsistent with demand–supply conditions. Assets prices in such situations become vulnerable to shocks creating an unsettled environment in the financial markets. Depending upon the extent of increase in prices beyond demand–supply conditions and nature of shock, the adjustments in asset prices could be detrimental to financial stability. The equity market in India has also risen sharply in the last few years. Although the macroeconomic fundamentals are as strong as corporate earnings, large demand by FIIs, given the limited supply of domestic assets, is putting pressure on the equity valuations.

3.16 RECENT GLOBAL FINANCIAL MARKET DEVELOPMENTS: LESSONS FOR FINANCIAL STABILITY

LO 9

Review recent global financial market developments and undesirable elements of financial development

Credit and market risks have increased, and financial markets have become more volatile in the recent period as a fall out of the sub-prime market in USA. Excessive leveraging has enhanced the vulnerability of the global financial system. Large changes in liquidity conditions are obscuring assessment of risks with attendant uncertainty. In order to strengthen the financial system against future strains, several lessons for both the private sector and the regulators and supervisors could be drawn. Although the full impact of the recent episode is not yet known and it is early to make definitive conclusions, several areas will require increased attention. The major lessons, which can be drawn, are as follows:

(i) The smooth running of banks, financial institutions and financial markets depends crucially on trust and credibility along with the availability of transparent information. The transparency of the distribution of risks across the financial system has tended to decrease, thus, presenting the official agencies with the question of how it might be possible to increase this transparency again. Much of the recent discussion on hedge funds has revolved around this point. Accurate and timely information about underlying risks is a critical component in the market's ability to differentiate and properly price risk. This would include both qualitative and quantitative information about how risks are managed, valued and accounted for, especially in areas of risk transfer. Greater transparency is also needed on links between systemically important financial institutions and some of their off-balance sheet vehicles. However, given the volume and complexity of the information and the cost of providing it, it will be important to carefully consider the appropriate amount and type of disclosure needed to ward off such episodes in future.

(ii) While securitisation and financial innovations have, through enhanced risk distribution, made markets more efficient, their role in the current situation may have to be better understood. The relationship between checks and balances throughout the supply chain of structured products may require some rethinking. Thus, while evaluating the stability situation in future, it will be even more important than in the past to combine a proper examination and assessment of new instruments, with an analysis of the behaviour of new market participants. This would appear to be the best way to deal with the fact that the financial system is not only expanding but also becoming increasingly complex.

(iii) There is a need for examination of risk analysis of credit derivatives and structured products and the role of rating agencies. Notwithstanding the important role of ratings and rating agencies in the functioning of financial markets, there is some concern about the rating methodology of complex products, particularly, when securities with very different structures, assumptions and liquidity characteristics receive the same ratings.

(iv) The issue of valuation of complex products in the context of a market where liquidity is insufficient to provide reliable market prices also needs to be examined. Investors may have to consider the associated liquidity aspects and include an appropriate liquidity risk 'premia' as part of the price, when purchasing complex products. Financial institutions holding such securities as collateral will also have to assign a 'haircut' to factors in liquidity characteristics.

(v) The relevant perimeter of risk consolidation for banks has proved to be larger than the usual accounting or legal perimeters. For instance, (a) reputational risk may force banks to internalise losses of legally independent entities; and (b) new instruments or structures may mask off-balance sheet or contingent liabilities. The result is that risks that appear to have been distributed, may yet return in various forms to the banks that distributed them. The relevant perimeter is not only an issue for supervisors, but also for the financial institutions themselves—their risk management systems, audit processes and internal oversight and governance structures.

(vi) Policymakers also face a delicate balancing act as they must establish frameworks that encourage investors to maintain high credit standards and strengthen risk management systems in better times as well as bad times. There is also a need for maintaining enhanced vigilance to be able to respond appropriately to the prevailing heightened uncertainties in global financial and monetary conditions.

(vii) There is a need to generate more objective information on the market value of collaterals, especially in situations where collaterals are not fully marked to market since such information may not be available on an on-going basis. The crisis also raised the issue as to whether there are limits to marking to market certain kinds of assets, whose values are not available on a high frequency basis.

(viii) Various market segments have become highly integrated as the problem which originated in the credit markets spread quickly to money markets and debt markets. This underlined the need for strengthening the oversight of financial markets in advanced countries. Also, while financial markets are becoming increasingly global, regulation of financial markets continues to be national. This deficiency needs to be addressed.

Sub-prime Crisis in U.S. and Its Impact on Indian Economy

The U.S. sub-prime mortgage crisis was a set of events and conditions that led to the late-2000s financial crisis, characterized by a rise in sub-prime mortgage delinquencies and foreclosures, and the resulting decline of securities backed by said mortgages. It causes the failure of mortgage companies, investment banks and government institutions which had heavily invested in sub-prime loans. The crisis can be attributed to a number of factors pervasive in both housing and credit markets. Causes include the inability of homeowners to make their mortgage payments, overbuilding during the boom period, risky mortgage products, increased power of mortgage originators, high personal and corporate debt levels, financial products that distributed and perhaps concealed the risk of mortgage default, bad monetary and housing policies, inappropriate credit rating, international trade imbalances and inappropriate government regulation. The impact of sub-prime crisis on the Indian economy has been felt in various ways. The BSE sensex had fallen by 15–20 percent (1000 points), and it has occurred mainly due to the withdrawal of foreign institutional investments from Indian capital market. Trade deficit has increased, and foreign exchange reserves depleted by $57 billion. India's export fell by 10 percent in 2008. With the outflow of FIIs, India's rupee depreciated approximately by 20 percent against U.S. dollar. Employment declined due to recession in the information technology and out sourcing industry.

3.17 UNDESIRABLE ELEMENTS OF FINANCIAL DEVELOPMENT

The growth of Indian financial institutions would appear to have, among others, the following elements: (a) sometimes it has taken place in spurts, cycles, temporary booms and unusual ways, and has, therefore, not been long-lasting; (b) it has taken place at the initiative of the government or as a result of some superimposition by the authorities; (c) it has been boosted by tax or fiscal concessions; (d) it has had a strong element of imitation or transplantation of foreign ideas and institutions; and (e) it has had an element of internal contradiction. The development of markets for rights debentures, convertible debentures and non-convertible debentures; the growth of lease finance companies, mutual funds and venture funds; the setting up of DFHI and the introduction of commercial paper and certificates of deposits bear one or more of these characteristics. The debates on universal banking and the role of CPR are the latest illustrations in this context.

The major justification behind importing certain developments to India has been that they exist and are known to work abroad. Certain experts have recommended the transplantation, importation and replication in India of almost every development or change taking place abroad without assessing its appropriateness, relevance, desirability and necessity in the Indian milieu. Artificially boosted by fiscal concessions, booms in lease finance, markets for certain types of debentures and the share market, have tended to peter out in no time, such as the fashion-booms in commodities markets. Some operators in the financial markets have not kept in mind the absorption capacity of the markets before introducing new services, new institutions, new claims and new schemes or plans. Financial development in India is characterised by indiscriminate multiplication of all these in every part of financial markets.

Many studies have shown that various fiscal or tax incentives (concessions) have tended to distort the yield structure and the distribution of savings among various claims, institutions and sectors.[13] On the one hand, banks are not allowed to operate in a big way in the stock markets and they are expected to channelise only limited credit to the medium and large companies. On the other hand, they are encouraged to setup subsidiaries and mutual funds for channelising funds mainly to the big companies through the stock market. The objectives of the work of many committees (viz., Dehejia, Tandon and Chore committees) were to introduce credit discipline, reduce capital-output ratio and force better inventory management in the private corporate sector. It is necessary to ponder as to how far fiscally boosted increase in the flow of funds to this sector through the stock market, mutual funds and so on is conducive to the achievement of such goals.

3.18 QUALITY OF FINANCIAL DEVELOPMENT

Finally, a few points about the quality of financial development in India are the following. There are many areas to which serious attention ought to be devoted with a view to improving the functioning of the IFS. The increasing politicisation of lending institutions and credit programmes, and the government's gross interference in them have been progressively undermining the credit discipline and increasing the financial distress in India. The core of the financial system has been much weakened by the venality and sycophancy of some functionaries of banks, financial institutions and the regulatory bodies towards politicians. This weakening process has been aggravated by the indulgence shown by banks and financial institutions in shady and underhand deals.

[13]See for example, Das-Gupta, A, 'Personal Taxation and Private Financial Savings', *Economic and Political Weekly*, February 10, 1990.

There are many cases where certain people have controlling interests in many companies without having adequate equity stake. It is learnt that public financial institutions (PFIs) collude with and support such minority private-controlling interests by owning high percentages of corporate equity. With the knowledge of accountants, merchant bankers and PFIs, project costs are inflated, capital issues are overpriced, the unsubscribed portions of such issues are sold at discount to PFIs, and the ordinary investors are lured and fleeced. The rating agencies promoted by PFIs have been found to oblige the project promoters supported by the same institutions. The capital market in India appears to have become somewhat like a casino finance-handling set-up, which is interested in astronomical capital gains rather than a stable, steady rate of return based on long-term growth. More and more people want to make quick money through middlemen's margins, commissions, 'advisory and consultancy' fees and so on. Of late, an indiscriminate growth of financial services industry has taken place in India also. The small, individual, retail investors have deserted the stock market almost completely. In the late 1960s, the Dutt Committee recommended an introduction of the convertibility clause in the loan covenants of PFIs to check the phenomenon of 'the control of private sector by some people with public money.' Over the years, the increasing ownership of corporate equity by PFIs has not solved this problem. If these institutions are 'amenable', 'reasonable', 'understanding' and 'helpful', the minority interests can continue to control corporates with public money, whatever form that money takes.

The investors in India feel cheated in respect of the risk, return and liquidity of their investments. The real rate of return has not been really adequate on account of administered interest rates in earlier years and relatively low rates even after deregulation and a high rate of inflation. A system of iniquitous returns has evolved as a result of interest rate policy and tax policy. The savers belonging to tax brackets have been in a position to earn a relatively better effective rate of return than the savers with low income. The liquidity of financial assets, particularly for small investors, is not high. The debentures lack it except when they enjoy buy-back facility; the ordinary shares possess it only to a limited extent because of the small size of floating stock, the small number of scrips with active market, limited number of hours of trading, the frequent closure of markets and insensitivity of brokers. The stock market has gone through a series of security scams which threw the financial markets in disarray and from which they have not recovered as yet. The stock market in India has not achieved sufficient depth; both primary and secondary markets are dominated by a few large companies and financial institutions; it is highly speculative, volatile, imperfect and lacks free entry. The valuation of companies by it has little relation with company fundamentals. As a result, the allocative efficiency of the market is poor.

The risk of investment is high due to dishonest practices, frauds committed and unethical investment culture. The investors experience a sense of helplessness and insecurity. They, therefore, do not have much confidence in financial markets. Investment in debentures, though technically secured, is quite risky because companies default with impunity, and, in certain cases, with government protection as 'relief undertakings'. The loan me (as and loan waivers in earlier years, mounting bad debts, low profitability and low capital base have made bank deposits also a risky asset. The prudential regulation and capital adequacy norms introduced after 1991 have somewhat changed this picture for the better. Even investments in small savings media and other liabilities of the government have become risky because of very imprudent government finances, ever increasing deficits and phenomenal increase in internal and external public debt.

All the sectors—agriculture, small-scale industry, medium and large-scale industry, public sector, private sector—in the economy have become afflicted by sickness jeopardising the viability of all the constituents—

commercial banks, cooperative banks, financial institutions—of the financial system. The viability and the stability of banks and other institutions have become one of the major concerns and goals of the public policy. Financial reforms appear to have hardly helped in this context. In fact, the deep sickness in the financial system has deepened further during the years of reforms, as reflected in the stock market scam; the failure of Commercial Credit Bank, Indian Bank and CRB Capitals and depression in stock markets and mutual funds and so on. The crisis, however, is not confined to India only. The international debt crisis, the failure of Savings and Loan Associations in the United States in the recent past, banking crises in the Scandinavian countries and Japan, and financial crises in Latin America point to the fact that financial crisis has become a world crisis during the years of free competition, free markets and greedy financial pursuits. The consequent micro and macro prudential concerns have forced the authorities the world over to introduce more rules, regulations and guidelines. We have thus witnessed a 'paradox of deregulation' in recent years in India as well as abroad. The politicisation of the financial system, the psychology generated by loan waivers, the wilful defaults by many have led to the growth of overdues and defaults. But they indicate the failure of the financial institutions also. Underfinancing and unrealistically tight repayment schedules, imperfect perception of borrowers' repaying capacity, inflexible procedures, shorter loan maturities, absence of initial grace period, delays in sanctions and disbursements of loans on the part of financial institutions have also contributed to the problem of overdues and defaults.[14] In other words, banks and financial institutions have failed to ensure proper project appraisal, effective follow-up of projects and efficient monitoring of the end-use of credit. They have failed to build up an effective, efficient and safe credit delivery system. The theory that financial development promotes allocational efficiency does not appear to have been validated by the Indian evidence.

On the whole, there is a tremendous scope for improving the operational, functional and allocational efficiency of the IFS. It is to be noted that the enormous development of financial infrastructure and the creditable rates of saving and investment have not produced creditable economic development, neither in terms of quantity nor quality. The financial development can produce the adequate and right kind of economic development only if it is used with greater efficiency, responsibility, conscience and ethical content.

SUMMARY

- The Indian financial system (IFS) has grown enormously since 1950 in terms of size, innovations, diversity, complexity and sophistication.
- Macroeconomic development indicators have improved largely in the period of liberalisation. Money supplies, savings, bank deposits and credit, primary and secondary issues and so on have increased tremendously.
- Over the post-independence period the financial sector in India has grown by many folds in terms of the varieties of financial institutions, markets, services and instruments.
- Significant reorganisation, globalisation, privatisation, deregulation, automation, computerisation, changes in ownership, consolidation and mergers of financial institutions have been effected. A veritable financial revolution appears to have occurred in India, as elsewhere, over the years.
- India differs from many other countries where 'household savings play a minor role with corporations generally playing the dominant role in the accumulation of national surplus'.

[14]Kahlon, A.S., 'Institutional Credit and Overdues', *Economic and Political Weekly*, February 2, 1991.

- The savings-investment gap has been negative in most of the years.
- The household sector is the major saving and surplus (saving-investment) sector.
- It is the phenomenon of institutionalisation of saving and financing investment, and not of securitisation, that has been predominant in India.
- The IFS has now become much more integrated than ever before. The earlier divisions such as 'organised' and 'unorganised' markets or the 'busy' and 'slack' seasons have become very much blurred now.
- The number of foreign collaborations in India and Indian collaborations and joint ventures abroad also have contributed to the establishment of linkages between India and foreign financial markets.
- The volatility and instability in financial markets in India and all over the world have increased after the introduction of the policy of liberalisation and globalisation. The stock markets in particular are experiencing wild swings in prices, trading volumes, and market capitalisation.
- The IMF is developing new applications for stress tests and other risk-assessment models to help identify and address financial system's vulnerabilities in member countries.
- The major indicators of financial instability are volatility of return on assets of banks and companies, non-performing assets of the banks, capital adequacy ratio, volatility of call money rate, volatility of the returns of the stock indices, volatility of exchange rates and so on.
- Financial Inclusion is the process of ensuring access to appropriate financial products and services needed by all sections of the society in general and vulnerable groups such as weaker sections and low-income groups in particular at an affordable cost in a fair and transparent manner by mainstream institutional players.
- The minimalist approach for financial inclusion focuses on the provision of a bouquet of basic financial products and services. The expanded approach for financial inclusion, on the other hand, focuses not only on the provision of the basic banking products but also other important ancillary financial products, such as, general insurance, health insurance, micro-pension, mutual fund, finance for affordable housing and so on.
- RBI has taken many steps to increase the financial inclusions in India.
- The estimated number of investor households in India is 24.5 million who constitute about 11 percent of total households.
- Rapid and on-going innovations in technology and communication infrastructure and its integration with the various modes of payments have led to significant changes in the payment and settlement systems.
- Demonetisation is the act of stripping a currency unit of its status as legal tender and it has both positive and negative implications and it varies across the time, that is, short-term and long-term.
- Rising oil prices, hedge funds, global financial imbalances are the major risks to the IFS.

KEY TERMS

Gross Savings	Financial Instability	Financial Inclusion
Total Capital Formation	Monetary Instability	Consumer Credit
Institutionalisation	Economic Instability	Demonetisation
Securitisation	Stress Testing	Market Micro Structure
Financial Integration	Prompt Corrective Action Scheme	Hedge Fund

QUESTIONS

1. Analyse the trends in saving and investment in India during the post-independent period.
2. The Indian economy has grown in many ways. Justify this statement.
3. How has the structure of financial institutions changed during the last two decades?
4. How the quality of financial development has changed in the recent period?
5. What are the undesirable elements of financial development?
6. Explain the concept of financial market integration in the context of Indian financial market.
7. Write a brief note on the development of financial market infrastructure in India.
8. What is financial stability and how the financial sector reforms affect financial stability?
9. How do you define financial inclusion? How it is measured? What are the policy measures taken by RBI for financial inclusion in India?
10. How the financial stability can be assessed and what are the indicators of financial stability?
11. What are the risks that affect the financial stability globally?

Financial Sector Reforms

4 CHAPTER

Learning Objectives

- **LO 1** Identify the need for financial reforms
- **LO 2** Recall the major reforms after 1991 and their impact
- **LO 3** Review critically some of the views from abroad against financial liberalisation
- **LO 4** Understand the challenges facing the Indian financial sector

4.1 INTRODUCTION

The New Economic Policy (NEP) of structural adjustments and stabilisation programme was given a big thrust in India in June 1991. The financial system reforms have received special attention as a part of this policy because of the perceived interdependent relationship between the real and financial sectors of the modern economy. Immediately after the announcement of NEP, the government had appointed a high level committee on financial system 'to examine all aspects relating to the structure, organisation, functions and procedures of the financial system'. The committee submitted its main report[1] in November 1991. Since then, the authorities have introduced a large number of changes or reforms in the Indian financial sector in the light of the said report. This chapter discusses the context, need, objectives, approach, content or particulars, and appraisal of financial sector or financial system reforms in India during 1991 through 2015, and indicates the future agenda for reforms.

4.2 NEED FOR FINANCIAL REFORMS

LO 1 Identify the need for financial reforms

The need for financial reforms had arisen because the financial institutions and markets were in a bad shape. The banking sector suffered from lack of competition, low capital base, low productivity and high intermediation costs. The role of technology was minimal, and the quality of service did not receive adequate attention. Proper risk management system was not followed, and prudential norms were weak.

[1]Government of India, Report of the Committee on the Financial System (Narasimham Committee), Bombay, November 1991. For appraisal of this report see Bhole, L M, "Proposals for Financial Sector Reforms in India— An Appraisal", *Vikalpa*, July–September 1992.

All these resulted in poor assets quality. Development financial institutions operated in an overprotected environment with most of the funding coming from assured sources. There was little competition in the insurance and mutual funds (MFs) industries. Financial markets were characterised by control over pricing of financial assets, barriers to entry and high transactions costs. The banks were running either at a loss or on very low profits, and, consequently, were unable to provide adequately for loan defaults and build their capital. There had been organisational inadequacies, the weakening of management and control functions, the growth of restrictive practices, the erosion of work culture and flaws in credit management. The strain on the performance of the banks had emanated partly from the imposition of high cash reserve ratio (CRR), statutory liquidity ratio (SLR) and directed credit programmes for the priority sectors—all at below market or concessional or subsidised interest rates. This, apart from affecting bank profitability adversely, had resulted in the low or repressed or depressed interest rates on deposits, and in higher interest rates on loans to the larger borrowers from businesses and industries. The phenomenon of cross-subsidisation had got built into the system where concessional rates provided to some sectors were compensated by higher rates charged to non concessional borrowers.

Further, the functioning of the financial system and the credit delivery as well as recovery process had become politicised, which damaged the quality of lending and the culture of repaying loans. The widespread or across-the-board write-offs of the loans had seriously jeopardised the viability of banks. As the closure of sick industrial units was discouraged by the government, banks had to continue to finance nonviable sick units, which further compromised their own viability. The legal system was not of much help in recovering loans. There was a lack of transparency in preparing statements of accounts by banks.

In other words, the reforms had become imperative on account of the facts that despite its impressive quantitative growth and achievements, the financial health, integrity, autonomy, flexibility and vibrancy in the financial sector had deteriorated over the past many years. The allocation of resources had become severely distorted, the portfolio quality had deteriorated and productivity, efficiency and profitability had been eroded in the system. Customer service was poor, work technology remained out-dated and transaction costs were high. The capital base of the system remained low, the accounting and disclosure practices were faulty and the administrative expenses had greatly soared. The system suffered also from a lack of delegation of authority, inadequate internal controls and poor housekeeping.

It was felt by many that all this was the consequence of policy-induced rigidities; of excessive degree of centralised administrative direction of investments, credit allocations and internal management of banks and financial institutions; massive branch expansion, overstaffing and union pressures; and excessive political intervention, interference, and pressures. For a long time, an alarming increase of sickness in the Indian financial system had required urgent remedial measures or reforms which were ultimately introduced in 1991.

The key words describing reforms have been liberalisation, deregulation, marketisation, privatisation and globalisation, all of which convey reforms objectives in a succinct manner. The basic premise underlying the reforms has been that the state ownership and regulation have harmed the financial system, particularly the banks and the investors, and that such regulation is no longer relevant and adequate. To use the well-known academic terminology, the objective of the financial reforms has been to correct and eliminate financial repression; and to transform a financially repressed system into a free system. At the same time, it has been held that the deregulation does not imply total absence of regulation; instead, it assumes sophisticated form of prudential, supervisory structure which would ‘protect the financial system without unnecessarily

restraining it'. The reforms are said to be directed towards 'stringent prudential regulation' in a 'deregulated environment'.

Financial sector reforms are said to be grounded in the belief that the competitive efficiency in the real sectors of the economy cannot be realized to its full extent unless the allocative efficiency of the private sector was improved. The main thrust of financial sector reforms was on the creation of efficient and stable financial institutions and markets; the removal of structural bottlenecks; introduction of new players and instruments; introduction of free pricing of financial assets; relaxation of quantitative restrictions; improvement in trading, clearing and settlement practices; promotion of institutional infrastructure; refinement of market microstructure; creation of liquidity, depth and the efficient price discovery process; and ensuring technological upgradation.

First-generation reforms were designed to restore basic equilibrium and to re-kindle growth. Second-generation reforms may be seen as the set of measures needed to enable a country to attain, in a sustained way, high-quality growth. *Second-generation reforms* are often conceived of as delving deeper into sectoral specificities. They are, in effect, micro reforms relating to a particular domain of activity. In his approach to second-generation reforms, Williamson argues that we need a broader view of institutions than is found in most of the existing literature. Institution building, he maintains, is not just about 'creating budget offices or regulatory organisations', instead, priority must be accorded to reform the judiciary and the civil service as well as the national legislative framework governing labour relations. Using India's first 10 years of liberalisation as one of their case studies, Barton *et. al.* also place the management of crises at the heart of the second-generation agenda. Globally, the IMF, the World Bank, the U.S. Treasury and the G7 institutions have spearheaded a movement for second-generation reforms on the premise that the:'stabilisation and structural adjustment programs of the past, while successful in jump-starting economies, have been unable to ensure the quality and sustainability of renewed growth ... a broader set of reforms is needed to sustain high-quality growth in a globalised environment and to close the disparity between the rich and poor countries'. These sets of reforms are referred to collectively as 'second-generation reforms'.

World Bank President James Wolfensohn shares Williamson's belief that the second generation of reform inevitably includes the unfinished business from the first generation. Wolfensohn sees the 'first and second generations [as] not being sequential'. Indeed, he maintains 'that the first and second generation actually coalesce in terms of timing …'. Wolfensohn also maintains that 'The second generation issues focus around the questions of the structure of the right institutions, the improvement of the administrative, legal, and regulatory functions of the state, addressing the incentives and actions that are required to have private sector development and to develop the institutional capacity for reforms'. Wolfensohn also contends that issues of equity, social justice and participation are also an integral part of the second-generation agenda: 'I would add to the list of second generation reforms a social framework that can allow you to deal with the people that fall out of the loop'. Wolfensohn's approach is consistent with the World Bank's official view, adopted as policy under his leadership in the late 1990s, that second-generation reforms will inevitably mean different things in different countries. The World Bank's Annual Report for 1997 used the example of the South Asian region to demonstrate this point: 'As the first wave of reforms that started in the early 1990s gained roots' in these countries, the Bank helped ... shift the focus to a second generation of reforms. In India, this involved addressing reform at the state level, and in Bangladesh and Pakistan it involved addressing governance issues which, though long present, have become key constraints to reform'.

The second generation of reforms in the Indian financial markets has focused on strengthening the oversight and risk management capacity of the regulators and self-regulatory organisations, advancing disclosure standards and information dissemination, expanding investor education and supporting insurance and pension reforms. In this context, the insurance and pension regulatory organisation have been set up in the Indian financial market. Many Indian civil society organisations involved in policy advocacy work have adopted definitions of second-generation reforms similar to Williamson's and Wolfensohn's. The Consumer Unity and Trust Society (CUTS), based in Jaipur with offices in London, Nairobi and Lusaka, argued in its 2003–2004 memorandum to India's finance minister (part of the prebudget consultation process) that India was only just witnessing the beginning of the second-generation economic reforms. CUTS saw the competition bill, electricity bill and right to information bill as pillars of the second-generation economic reforms.

Writing on India's version of the second generation of reforms, government economist Mr. Arnab Mukherjee says in a recent article titled 'India's Economic Reforms: the Second Phase' as follows: Broadly, the first phase consisted of reducing fiscal indebtedness, trade liberalisation and trade policy reform. The second phase of economic reforms in India is characterised by introduction of faster trade reforms such as removal of quantity restrictions and channelised imports, rationalisation of taxation, public sector disinvestment and restructuring of public expenditure. Now we need to check if the current economic structure is suitable for medium- to long-run growth. Whether the structure is suited to garner benefits in the secondary phase of reforms? The 74th Amendment of the Constitution (1995) allows for increased decentralisation of political power and devolution of fiscal authority to the local bodies such as the Panchayats. The earlier top-down approach suffers from the problem of not being sensitive enough to the specific needs of the local bodies. This amendment would correct such a symmetries between needs and supply.

The approach or strategy of reforms has been such that they are being affected by adapting the old institutions in the new tasks and ethos. A careful attempt has been made at crisis-avoidance and at creating an environment which promotes greater efficiency in the delivery of financial services. The financial sector reforms have been operating in conjunction with a larger set of goals relating to economic stability and growth. The reforms have been introduced at a gradual pace combined with effective and appropriate regulation and intervention policy. Efforts have also been made to fulfil (meet) the 'commandments' (prerequisites) of financial sector reforms, namely, carrying out a macroeconomic stabilisation programme, introducing supportive fiscal and external sector policies and implementing wide-ranging reforms in other sectors simultaneously.

4.2.1 Main and Sub Objectives of Financial Reforms Introduced in 1991

(i) To develop a market-oriented, competitive, world-integrated, diversified, autonomous, transparent financial system.

(ii) To increase the allocative efficiency of available savings and to promote accelerated growth of the real sector.

(iii) To increase or bring about effectiveness, accountability, profitability, viability, vibrancy, balanced growth, operational economy and flexibility, professionalism, and politicisation in the financial sector.

(iv) To increase the rate of return on real investment.

(v) To promote competition by creating level-playing fields and facilitating free entry and exit for institutions and market players.

(vi) To ensure that the rationalisation of interest rates structure occurs, that interest rates are flexible, market-determined or market-related, and that the system offers to its users a reasonable level of positive real interest rates. In other words, the goal has been to dismantle the administered system of interest rates.

(vii) To reduce the levels of resource preemptions and to improve the effectiveness of directed credit programmes.

(viii) To build a financial infrastructure relating to supervision, audit, technology, and legal matters.

(ix) To modernise the instruments of monetary control so as to make them more suitable for the conduct of monetary policy in a market economy, that is, to increase the reliance on indirect or market-incentives-based instruments rather than direct or physical instruments of monetary control.

4.3 MAJOR REFORMS AFTER 1991

LO 2

Recall the major reforms after 1991 and their impact

The reforms have had a broad sweep encompassing operational matters, banking, primary and secondary stock markets, government securities market, external sector policies and the system as a whole. Some people have classified them into three areas: issues relating to creating a resilient banking system; development of institutions such as private sector banks and MFs; and monetary policy instruments such as interest rates, reserve ratios and refinancing facilities. In other words, reforms relate to the issues of ownership and control, competition and policy and regulation stance. While presenting a list of reforms, it needs to be pointed out that sometimes a distinction between normal policy changes which are specific to time and economic conditions, and proper reforms proper is not maintained; the former are included in the latter, which makes the list of reforms unduly and unmanageably long. To reform means to make (improve) or become better by the removal of faults or errors or abuses. It is primarily in this sense that the major reforms are listed below in terms of certain categories.

4.3.1 Systemic Policy Reforms

- Most of the interest rates in the economy are deregulated; a beginning made to move towards market rates on government securities; the system of administered interest rates largely dismantled; and the structure of interest rates greatly simplified.
- The preemption of banks' resources through SLR in favour of the government was brought down and the rate of return on SLR securities is maintained by and large at market rates. The SLR on incremental net domestic and time liabilities (NDTL) of banks reduced from 38.5 percent in 1991–1992 to 20.75 percent now.
- The average CRR reduced from 15 percent in 1991–1992 to 4 percent in 2015–2016. The CRR of FCNR (B) and NRNR deposit accounts removed.
- Capital adequacy norms for banks, financial institutions and virtually all market intermediaries introduced. The Basle Committee framework for capital adequacy adopted.

- A Board of Financial Supervision (BFS) with an advisory council and an independent department of supervision established in RBI. It would supervise, apart from banks, all-India financial institutions and nonbanking financial companies from April to July 1995. A new Supervisory Reporting System, introduced in February 1995, will focus attention on critical areas such as capital adequacy, assets quality, management, earnings and liquidity.
- Recovery of Debts Due to Banks and Financial Institutions Act, 1993 passed to set up Special Recovery Tribunals to facilitate quicker recovery of loan arrears.
- In order to moderate or minimise the automatic monetisation of the budget deficit, the agreement to impose a ceiling on the issue of ad hoc treasury bills (TBs) and to phase them out in due course signed by the Government of India (GOI) and RBI in September 1994. Subsequently, the system of ad hoc treasury bills abolished and replaced by the system of ways and means advances effective April 1, 1997.
- The private sector allowed to set up banks, MFs, money market MFs, insurance companies and so on, public sector banks permitted diversified ownership by law subject to 51 percent holding of government/ RBI. SBI, IFCI and IRBI converted into public limited companies. The policy of permitting foreign banks to open branches liberalised.
- Capital Issues (Control) Act, 1947 repealed and the office of Controller of Capital Issues abolished.
- Securities and Exchange Board of India (SEBI) made a statutory body in February 1992 and armed with necessary authority and powers for regulation and reform of the capital market.
- Convertibility clause is no longer obligatory in the case of assistance sanctioned by term lending institutions. Floating interest rate on financial assistance (linked to interest rate on 364-day TBs) introduced by all-India development banks.
- CCIL is a Central Counterparty (CCP) was set up in April 2001 to provide clearing and settlement for transactions in Government securities, foreign exchange and money markets in the country.
- The Reserve Bank of India (Amendment) Act 1997 passed requiring all nonbank financial companies (NBFCs) with net-owned funds of ₹25 lakh and more to register with the RBI.
- Over the Counter Exchange of India (OTCEI) and the National Stock Exchange (NSE) with nationwide stock trading and electronic display, clearing and settlement facilities established and made operational.
- Twin objectives of 'maintaining price stability' and 'ensuring availability of adequate credit to productive sectors of the economy to support growth' continue to govern the stance of monetary policy, though the relative emphasis on these objectives has varied depending on the importance of maintaining an appropriate balance.
- Reflecting the increasing development of financial market and greater liberalisation, use of broad money as an intermediate target has been deemphasised and a multiple indicator approach has been adopted.
- Emphasis has been put on development of multiple instruments to transmit liquidity and interest rate signals in the short-term in a flexible and bidirectional manner.
- Interlinkage between various segments of the financial market including money, government security and forex markets instruments has increased.
- There has been a move from direct instruments (such as administered interest rates, reserve requirements, selective credit control) to indirect instruments (such as open market operations, purchase and repurchase of government securities) for the conduct of monetary policy.

- Liquidity adjustment facility (LAF) has been introduced, which operates through repo and reverse repo auctions, effectively provide a corridor for short-term interest rate. LAF has emerged as the tool for both liquidity management and also as a signalling devise for interest rate in the overnight market.
- Use of open market operations are used to deal with overall market liquidity situation especially those emanating from capital flows.
- There has been introduction of Market Stabilisation Scheme (MSS) as an additional instrument to deal with enduring capital inflows without affecting short-term liquidity management role of LAF.
- Automatic monetisation has been discontinued through an agreement between the government and the Reserve Bank.
- Introduction of delivery versus payment system and deepening of interbank repo market.
- Primary dealers are introduced in the government securities market to play the role of marketmaker. Securities Contracts Regulation Act (SCRA) has been amended to create the regulatory framework.
- Government securities market has been deepened by making the interest rates on such securities market related.
- Auction of government securities has been introduced.
- A risk-free credible yield curve has been developed in the government securities market as a benchmark for related markets.
- A pure interbank call money market has been developed.
- Nonbank participants are allowed to participate in other money market instruments.
- Automated screen-based trading in government securities has been introduced through negotiated dealing system (NDS).
- Setting up of risk-free payments and system in government securities through Clearing Corporation of India Limited (CCIL).
- There has been phased introduction of real-time gross settlement (RTGS) system.
- Forex market has been deepened and the autonomy of authorised dealers (Ads) has increased.
- Technical advisory committee on monetary policy with outside experts has been set up to review macroeconomic and monetary developments and advise the Reserve Bank on the Stance of Monetary Policy.
- A separate financial market department within the RBI has been created.

4.3.2 Banking Reforms

- Interest rates on deposits and advances of all cooperative banks including urban cooperative banks deregulated. Similarly, interest rates on commercial bank loans above ₹2 lakh, and on domestic term deposits above 2 years, and Non-Resident (External) Rupee Accounts [NRNR] deposits decontrolled.
- The State Bank of India and other nationalised banks enabled to access the capital market for debt and equity.
- Prudential norms for income recognition, classification of assets and provisioning for bad debts for commercial banks, including regional rural banks and financial institutions, introduced. They are required to adopt uniform and sound accounting practices in respect of these matters, and the valuation of investments. Banks are required to mark to market the securities held by them.

- The Performance Obligations and Commitments (PO&C) obtained by RBI from each bank; they provide for essential quantifiable performance parameters which lay emphasis on increased but low-cost deposits, quality lending, generation of more income and profits, compliance with priority sectors and export lending requirements, improvement in the quality of investments, reduction in expenditure and stepping up of staff productivity. The PO&C are meant to ensure a high level of portfolio quality so that problems such as heavy losses, low profits, erosion of equity do not recur. The nonfulfillment of PO&C entail penalty in the form of higher CRR/SLR, stoppage of RBI refinance facility, stoppage of further capital contribution by the government and so on.
- Banks required making their balance sheets fully transparent and making full disclosures in keeping with International Accounts Standards Committee.
- Banks given greater freedom to open, shift and swap branches, as also to open extension counters.
- The perceived constraints on banks, such as prior credit authorisation, inventory and receivables norms, obligatory consortium lending and curbs in respect of project finance relaxed.
- The budgetary support extended for recapitalisation of weak public sector banks.
- Banking Ombudsman Scheme, 1995 introduced to appoint 15 ombudsmen (by RBI) to look into and resolve customers' grievances in a quick and inexpensive manner. Most of the recommendations of Goiporia Committee in connection with improving customer service by banks implemented.
- Banks set free to fix their own foreign exchange open position limit subject to RBI approval.
- Loan system introduced for delivery of bank credit. Banks required to bifurcate the maximum permissible bank finance into loan component (short-term working capital loan) and cash credit component, and the policy of progressively increasing the share of the former introduced.
- Operational autonomy has been granted to public sector banks.
- Public ownership in public sector banks is reduced by allowing them to raise capital from equity market up to 49 percent of paid-up capital.
- Transparent norms have been issued for entry of Indian private sector, foreign and joint-venture banks and insurance companies, permission for foreign investment in the financial sector in the form of foreign direct investment (FDI) as well as portfolio investment, permission to banks to diversify product portfolio and business activities.
- Roadmap has been developed for presence of foreign banks and guidelines are issued for mergers and amalgamation of private sector banks and NBFCs.
- Guidelines on ownership and governance in private sector banks are developed.
- Sharp reduction in preemption through reserve requirement, market-determined pricing for government securities, disbanding of administered interest rates with a few exceptions and enhanced transparency and disclosure norms to facilitate market discipline.
- Introduction of pure interbank call money market, auction-based repos-reverse repos for short-term liquidity management, facilitation of improved payments and settlement mechanism.
- Significant advancement in dematerialisation and markets for securitised assets are being developed.
- Introduction and phased implementation of international best practices and norms on risk-weighted capital adequacy requirement, accounting, income recognition, provisioning and exposure.
- Measures to strengthen risk management through recognition of different components of risk, assignment of risk-weights to various asset classes, norms on connected lending, risk concentration, application

of marked-to-market principle for investment portfolio and limits on deployment of fund in sensitive activities.

- 'Know Your Customer' and 'Anti Money Laundering' guidelines, roadmap for Basel II, introduction of capital charge for market risk, higher graded provisioning for NPAs, guidelines for ownership and governance, securitisation and debt restructuring mechanisms norms and so on.
- Setting up of *lok adalats* (people's courts), debt recovery tribunals, asset reconstruction companies, settlement advisory committees, corporate debt restructuring mechanism and so on for quicker recovery/ restructuring.
- Promulgation of Securitisation and Reconstruction of Financial Assets and Enforcement of Securities Interest (SARFAESI) Act, 2002 and its subsequent amendment to ensure creditor rights.
- Setting up of Credit Information Bureau of India Limited (CIBIL) for information sharing on defaulters as also other borrowers.
- Setting up of CCIL to act as central counter party for facilitating payments and settlement system relating to fixed income securities and money market instruments.
- Establishment of the board for financial supervision as the apex supervisory authority for commercial banks, financial institutions and nonbanking financial companies.
- Introduction of CAMELS supervisory rating system, move towards risk-based supervision, consolidated supervision of financial conglomerates, strengthening of offsite surveillance through control returns.
- Recasting of the role of statutory auditors, increased internal control through strengthening of internal audit.
- Strengthening corporate governance, enhanced due diligence on important shareholders, fit and proper tests for directors.
- Setting up of INFINET as the communication backbone for the financial sector, introduction of negotiated dealing system (NDS) for screen-based trading in government securities and real time gross settlement (RTGS) system.
- The recommendations of the Working Group on BPLR (Chairman: Shri Deepak Mohanty) were implemented with the introduction of the Base Rate with effect from July 1, 2010.
- A High Level Task Force was constituted by the Government of India (Chairman: Shri T.K.A. Nair) to consider various issues relating to the Micro, Small and Medium Enterprises (MSMEs). Pursuant to the recommendations of the Task Force, SCBs have been advised on June 29, 2010 to achieve the share of Micro enterprises in MSE lending of 60 percent prescribed in stages.
- Regional Rural Banks (RRBs) continued to take initiatives in the area of financial inclusion by opening 'No–frills Accounts', issuing Kisan Credit Cards (KCC) and General Credit Cards (GCC) and dispensing micro credit through formation and credit linkage of SHGs.
- The Cheque Truncation System (CTS) was implemented in the National Capital Region in February 2008 to enhance the efficiency of the paper-based clearing system.
- Credit Information Bureau of India Limited (CIBIL) has been advised to revise the format of reporting of data by banks to CIBIL to classify accounts as closed accounts, settled accounts, restructured accounts and written off accounts with dates and with specific flag in status field, separately to better reflect credit history of an individual.

- The repo rate was made the single policy rate to more accurately signal the monetary policy stance with the reverse repo rate pegged at a fixed 100 basis points below the repo rate. A new Marginal Standing Facility (MSF) was also instituted under which Scheduled Commercial Banks (SCBs) could borrow overnight up to 1 percent of their respective Net Demand and Time Liabilities (NDTL), carved out of the required SLR portfolio.
- The Reserve Bank has advised banks to put in place a system of online alerts latest by June 30, 2011 to cardholders, for all types of transactions, irrespective of the amount involved through various channels due to the increased instances of fraudulent withdrawals at ATMs.
- The interest rate on export credit in foreign currency was deregulated effective May 5, 2012. This measure is expected to increase foreign currency loans to exporters.
- Banks were advised to introduce Unique Customer Identification Code (UCIC) for their customers in India. The UCIC will help banks to identify customers, track the facilities availed of, monitor financial transactions in a holistic manner and enable banks to have a better approach to risk profiling of customers.
- In order to address gender-related aspects of empowerment and financial inclusion, Union Budget 2013–2014 announced to set up India's first Women's Bank as a public sector bank with 10 billion as initial capital.

4.3.3 Primary and Secondary Stock Market Reforms

- A norm of five shareholders for every ₹1 lakh of fresh issues of capital and 10 shareholders for every ₹1 lakh of offer for sale prescribed as an initial and continuing listing requirement.
- The payment of any direct or indirect discounts or commissions to persons receiving firm allotment prohibited.
- Debt issues not accompanied by an equity component permitted to be sold entirely by the book-building process.
- Housing finance companies considered to be registered for issue purposes, provided they are eligible for refinance from the National Housing Bank.
- Issuers allowed to list debt securities on stock exchanges without their equity being listed.
- MFs permitted to underwrite public issues.
- The stock exchanges required to disclose, carry forward position scrip-wise and broker-wise at the beginning of carry forward session.
- A ceiling of ₹10 crores imposed on stock market members doing business of financing carry forward transactions.
- Depositories Act, 1996 passed to provide a legal framework for the establishment of depositories to record ownership details in book entry form, and to facilitate dematerialisation of securities. The Depositories Related Laws (Amendment), 1997 issued through an ordinance will now allow banks, MFs and IDBI to dematerialise their scrips.
- Stock lending scheme without attracting capital gains introduced. Under this scheme, short sellers can borrow securities through an intermediary before making such sales.
- Stock exchanges asked to modify listing agreements in order to provide for the payment of interest by companies to investors from the 30th day of the closure of public issue.

- All stock exchanges required to institute the buy-in or auction process.
- Stock exchanges asked to collect 100 percent daily margins on the notional loss of a broker for every scrip, to restrict gross traded value to 33.33 times the broker's base minimum capital and to impose quarterly margins on the basis of concentration ratios.
- The stock exchanges are being modernised; many of them have introduced electronic trading system; the Bombay Stock Exchange has started its online trading system, BOLT.
- The Bombay Stock Exchange and other exchanges with screen-based trading system allowed to expand their trading terminals to locations where no stock exchange exists, and to others subject to an understanding with the local stock exchange.
- Both short and long sales are required to be disclosed to the exchange at the end of each day, and they are to be regulated through the imposition of margins.
- There are many other stock market reforms which have been introduced during the past 5 to 6 years. The important ones among them are listed in Chapter 7.
- SEBI framed guidelines relating to disclosure of grading of the initial public offer (IPO) by issuer companies who may want to opt for grading of their IPOs by the rating agencies. If the issuer companies opt for grading, then they are required to disclose the grades, including the unaccepted ones, in the prospectus.
- SEBI issued directions for the issuing companies, relating to qualified institutions' placement, to pave the path for a fast and cost-effective way of raising resources from Indian securities market.
- In order to further strengthen Know Your Client (KYC) norms in the cash market and to generate are liable audit trail, PAN was made mandatory for all transactions in the cash market with effect from January 01, 2007.
- PAN was made mandatory for all demat accounts, opened after April 01, 2006, pertaining to all categories including minors, trusts, foreign corporate bodies, banks, corporates, FIIs and nonresident Indians (NRIs). For demat accounts that existed prior to April 1, 2006, time for furnishing and verification of PAN card details was extended upto December 31, 2006.
- Procedure for reintroduction of derivatives contracts and modified position limits were reviewed by the Secondary Market Advisory Committee (SMAC). Further, based on a decision taken by SEBI board, Derivatives Market Review Committee was set up to carry out a comprehensive review of developments and to suggest future directions for derivatives market in India.
- The investment limit for FIIs in government securities (including treasury bills) was raised from USD 2 billion to USD 2.6 billion by RBI. The list of eligible investment categories of FIIs was enlarged to allow more participation in the Indian securities market.
- SEBI Board approved the draft guidelines for real estate MFs (REMFs). REMF means a scheme of a MF which has investment objective to invest directly or indirectly in real estate property and shall be governed by the provisions and guidelines under SEBI (Mutual Funds) Regulations.
- SEBI introduced a new mode of payment in public issues through book building wherein the application money remains blocked in the bank account of the applicant till allotment is finalised.
- Adoption of International Financial Reporting Standards (IFRS).
- Foreign Institutional Investors (FIIs) permitted to offer Domestic Government Securities as collateral for margins.

- Setting up of a stock exchange/a trading platform by a recognised stock exchange having nationwide trading terminals for Small and Medium Enterprises (SMEs).
- Certification of approved users and sales personnel of the trading members of the currency derivatives segment trading in interest rate derivatives.
- Modification to Investor Protection Fund (IPF)/Customer Protection Fund (CPF) Guidelines.
- Review of Internet-based trading and securities trading using wireless technology.
- In order to facilitate early redressal of investor grievances, SEBI has mandated that stock exchanges having nationwide terminals (such as NSE, BSE, MCX-SX and USEIL), functional stock exchanges having trading volumes, stock exchanges entering into MOU with other exchanges and stock exchanges intending to recommence trading operations shall constitute investor grievance redressal committees (IGRC) at every investor service centre.
- Introduction of liquidity enhancement schemes for illiquid securities in equity derivatives segment.
- Introduction of derivative contracts on Foreign Stock Indices.
- SEBI has mandated the top 100 listed companies to include Business Responsibility Report as part of annual reports with a focus on the environmental, social and governance issues.

4.3.4 Government Securities Market Reforms

- A 364-day treasury bill (TB) replaced the 182-day TB in 1992–1993, and it is being sold by fortnightly auction since April 1992.
- Auction of 91-day TB commenced from January 1993.
- Maturity period for new issues of central government securities shortened from 20 to 10 years and that for state government securities from 15 to 10 years.
- Funding of auction TBs into fixed coupon dated securities at the option of holders introduced since April 19, 1993.
- Six new instruments introduced: (a) zero coupon bonds on 18.1.94, (b) tap stock on 29.7.94, (c) partly paid government stock on 15.11.94, (d) an instrument combining the features of tap and partly-paid stocks on 11.9.95, (e) floating rate bonds on 29.9.95, and (f) capital indexed bonds in 1997.
- State governments and provident funds allowed to participate in 91-day TB auctions on a noncompetitive basis from August 1994.
- A scheme for auction of government securities from RBI's own portfolio as a part of its open market operations announced in March 1995.
- The institution of primary dealers in government securities market established and guidelines for them issued in March 1995.
- A system of Delivery vs. Payment (DVP) in Subsidiary General Ledger (SGL) transactions introduced in Bombay in July 1995.
- Reverse repo facility with RBI in government dated securities extended to Discount and Finance House of India (DFHI) and Securities Trading Corporation of India (STCI).
- Administered interest rates on government securities were replaced by an auction system for price discovery.
- Automatic monetisation of fiscal deficit through the issue of ad hoc treasury bills was phased out.

- Primary dealers (PD) were introduced as market makers in the government securities market.
- For ensuring transparency in the trading of government securities, delivery versus payment (DvP) settlement system was introduced.
- Repurchase agreement (repo) was introduced as a tool of short-term liquidity adjustment.
- Subsequently, the liquidity adjustment facility (LAF) was introduced. LAF operates through repo and reverse repo auctions and provide a corridor for short-term interest rate. LAF has emerged as the tool for both liquidity management and also signalling device for interest rates in the overnight market. The Second LAF (SLAF) was introduced in November 2005.
- MSS has been introduced, which has expanded the instruments available to the Reserve Bank for managing the enduring surplus liquidity in the system.
- Effective April 1, 2006, RBI has withdrawn from participating in primary market auctions of government paper.
- Banks have been permitted to undertake primary dealer business while primary dealers are being allowed to diversify their business.
- Short sales in government securities is being permitted in a calibrated manner while guidelines for 'when issued' market have been issued recently.
- 91-day treasury bill was introduced for managing liquidity and benchmarking. Zero coupon bonds, floating rate bonds, capital indexed bonds were issued and exchange traded interest rate futures were introduced. OTC interest rate derivatives like IRS/FRAs were introduced.
- Outright sale of central government dated security that are not owned have been permitted, subject to the same being covered by outright purchase from the secondary market within the same trading day subject to certain conditions.
- Repo status has been granted to state government securities in order to improve secondary market liquidity.
- FIIs were allowed to invest in government securities subject to certain limits.
- Introduction of automated screen-based trading in government securities through negotiated dealing system (NDS). Setting up of risk-free payments and settlement system in government securities through CCIL.
- Phased introduction of real time gross settlement system (RTGS).
- Introduction of trading in government securities on stock exchanges for promoting, retailing in such securities, permitting nonbanks to participate in the repo market.
- Recent measures include introduction of NDS-OM and T+1 settlement norms.
- The initiatives taken for the development of government security market in the post financial crisis period (2009–2010) were aimed at upgrading the systems, harnessing the development in technology, ensure greater transparency, smoothening operating procedure and deepening the market.
- NDS-Auction (Negotiated Dealing System-Auction) version 2.0 was upgraded to conduct auction for dated securities with effect from 13 May 2009.
- H.R. Khan Committee (2009) recommended some measures to enhance the efficiency of auction procedure, which includes early announcement of the results of action and submission of noncompetitive bids in electronic form.

- For deepening of government securities market, RBI facilitated 'Ready Forward Facility' in dated securities, treasury bills and state development loans to entities having either Subsidiary General Ledger (SGL) account or Constituent Subsidiary General Ledger (CSGL) account.
- STRIPS (Separate Trading of Registered Interest and Principal of Securities) in government securities was introduced in April 1, 2010. The primary objective is to ensure availability of sovereign zero coupon bonds.
- Noncompetitive bidding for state government securities was introduced from the auction held on 25 August 2009.
- The guidelines for SGL transfer were reviewed in the light of the provisions of sections 27 and 30(3) of the Government Securities Act, 2006 and the existing regulatory penalty for SGL bouncing was replaced with a transparent and rule-based pecuniary penalty in July 2010.
- With the stabilisation of the transaction and settlement infrastructure, DvP-III (Delivery vs. Payment) facility has been extended in July 2011 to transactions by the gilt account holders (excluding transactions between the gilt account holders of the same custodian) so that the gilt account holders get the benefit of efficient use of funds and securities.
- To improve the efficiency of the auction process of G-sec, viz., Government of India dated securities, treasury bills (T-bills), cash management bills and state development loans, the timings for primary auction under competitive bidding have been revised from 10.30 am–12.30 pm to 10.30 am–12.00 pm from April 13, 2012. This will permit more time for secondary market transactions for the securities auctioned on that day.
- In 2011, to facilitate direct participation by retail and midsegment investors in G-sec auctions, the Reserve Bank has allowed web-based access to the negotiated dealing system (NDS)-auction developed by the CCIL.
- The period of short sale was extended from 5 days to 3 months from February 1, 2012. This is expected to give a fillip to the IRF market by helping participants to hedge/arbitrage more effectively, and to develop the term repo market.

4.3.5 Derivatives Market Reforms

- The Interest Rate Futures contract on 10-year notional coupon bearing GOI (Government of India) security was introduced on August 31, 2009.
- Technical Advisory Committee (TAC) on the Money, Foreign Exchange and Government Securities Markets proposed to introduce interest rate futures on 5-year and 2-year notional coupon bearing securities and 91-day treasury bills.
- In 2007, the Reserve Bank had issued draft guidelines for introduction of credit default swaps (CDS) in India enabling the investors to transfer/hedge their credit risk.
- In India, centralised reporting of OTC trades in interest rate derivatives [interest rate swap (IRS)/forward rate agreements (FRAs)] commenced in August 2007 on the reporting platform of CCIL.
- The currency futures are operational in USD-INR since August 2008. Three more currency pairs, viz., Euro-INR, Japanese Yen-INR and Pound Sterling-INR were introduced in the currency futures market during 2009–2010 to provide more avenues to hedge the currency exposure of Indian residents.

- In order to provide participants with additional instruments to manage volatility in the short-term interest rates, IRFs on 91-day treasury bills were permitted since March 2011.
- In May 2011, CDS on corporate bond was operationalised and final guidelines were issued in this regard.
- The comprehensive guidelines on OTC foreign exchange derivatives and overseas hedging of commodity price and freight risks were issued in December 2010. The important elements are: (i) AD (Authorized Dealer) category banks can only offer plain vanilla European cross currency options; (ii) allowing embedded cross-currency option in the case of foreign currency-rupee swaps; (iii) permitting use of cost reduction structures, both under the contracted exposures and past performance routes, subject to certain safeguards; and (iv) allowing swaps to move from rupee liability to FOREX liability, subject to certain safeguards.
- The guidelines on 91-day TB IRFs were issued on March 7, 2011. Further, the guidelines for cash-settled 2-year and 5-year IRFs were issued on December 30, 2011.
- In December 2011, a trade repository—CCIL online reporting engine (CORE)—has been set up for reporting CDS trades. Value-free transfer of securities has also been permitted to meet margin requirements.
- To improve tradability and facilitate centralised clearing and settlement of IRS contracts in future, IRS contracts have been standardised**.** The standardisation of IRS contracts has been achieved in terms of minimum notional principal amount, tenors, trading hours, settlement calculations and so on.

4.3.6 External Financial Market Reforms

- Flexible exchange rate system introduced and exchange controls largely dismantled.
- FIIs allowed access to Indian capital market on registration with SEBI. FIIs permitted to invest up to 10 percent in equity of any company, to invest in unlisted companies, to set up pure (100 percent) debt funds and to invest in government securities. Foreign endowment funds, university funds, foundations and charitable trusts/societies are allowed to register as FIIs.
- Indian companies permitted to access international capital markets through various instruments including euro-equity issues.
- The Union Budget 1997–1998 proposed the replacement of Foreign Exchange Regulation Act (FERA), 1973 by a Foreign Exchange Management Act (FEMA) to facilitate easy capital flows.
- Rupee made convertible on current account and a considerable progress made in introducing capital account convertibility.
- The rate of long-term capital gains tax on portfolio investments by NRIs reduced from 20 percent to 10 percent and brought on par with the rate for FIIs.
- NRIs, OCBs and FIIs permitted to invest up to 24 percent in equities of Indian companies engaged in all activities except those of agriculture and plantation.
- In case of medium- and long-term external commercial borrowings (ECBs), on lending of the proceeds of development finance institutions to different borrowers at different maturities permitted. All corporates, institutions, railways and telecommunications permitted to utilise the foreign currency proceeds upto U.S. $3 million for incurring rupee expenditure with a minimum simple maturity of 3 years. Telecommunications and oil exploration and development (excluding refining) companies permitted to raise ECBs at a minimum of 5 years average maturity instead of 7 years even for borrowings

exceeding U.S. $15 million equivalent. Exporters permitted to raise ECB for meeting project-related rupee expenditure upto the equivalent of U.S. $15 million, or the average annual exports of the previous 3 years, whichever is lower. All infrastructure and greenfield projects permitted to avail of ECBs to the extent of 35 percent of the project cost (50 percent for telecommunication sector).

- Companies permitted to retain euro-issue proceeds as foreign currency deposits with banks and public financial institutions in India. Further, companies permitted to remit funds into India in anticipation of the use of funds for general corporate restructuring and working capital needs. Euro issues are now treated as direct foreign investment in the issuing companies. Restrictions on the number of issues to be floated by a company or group of companies in a given year removed. Banks, financial institutions and NBFCs registered with the RBI made eligible for GDR issue, without reference to the end-use.
- RBI made a single-window agency for receipt and disposal of proposals for overseas investments by Indian companies.
- The Foreign Investment Promotion Board (FIPB) reconstituted and Foreign Investment Promotion Council set up to promote FDI in India.
- Evolution of exchange rate regime from a single-currency fixed-exchange rate system to fixing the value of rupee against a basket of currencies and further to market-determined floating exchange rate regime.
- Adoption of convertibility of rupee for current account transactions with acceptance of Article VIII of the Articles of Agreement of the IMF. De facto full capital account convertibility for nonresidents and calibrated liberalisation of transactions undertaken for capital account purposes in the case of residents.
- Development of rupee-foreign currency swaps market.
- Introduction of additional hedging instruments, such as foreign currency-rupee options.
- ADs permitted to use innovative products like cross-currency options; IRS and currency swaps, caps/collars and FRAs in the international forex market.
- ADs permitted to initiate trading positions, borrow and invest in overseas market subject to certain specifications and ratification by respective Banks' Boards. Banks are also permitted to fix interest rates on nonresident deposits, subject to certain specifications, use derivative products for asset liability management and fix overnight open position limits and gap limits in the foreign exchange market, subject to ratification by RBI.
- Permission to various participants in the foreign exchange market, including exporters, Indians investing abroad, FIIs, to avail forward cover and enter into swap transactions without any limit subject to genuine underlying exposure.
- FIIs and NRIs permitted to trade in exchange-traded derivative contracts subject to certain conditions.
- Foreign exchange earners permitted to maintain foreign currency accounts. Residents are permitted to open such accounts within the general limit of U.S. $25,000 per year.
- The special rupee refinance facility to EXIM banks was discontinued with effect from 1 April, 2010.
- ACU (Asian Clearing Union) participants were conferred with the option of settling their transaction either through ACU dollar or ACU euro with effect from January 1, 2009.
- The guidelines for issue of Indian Depository Receipts (IDRs) have been operationalised since July 2009, thereby enabling foreign companies to mobilise funds directly from the Indian capital market. FIIs registered with the SEBI and the NRIs are also allowed to invest, purchase, hold and transfer IDRs.
- An online reporting system for Overseas Direct Investment (ODI) by the Indian parties has been operationalised with effect from March, 2010. The new system would enable online generation of the

Unique Identification Number, acknowledgment of remittance/s and filing of the Annual Performance Reports and easy accessibility of data at the AD level for reference purposes.

- During 2010–2011, capital flows were largely absorbed by the current account deficit (CAD). FII investment, ECBs, external assistance and NRI deposits dominated capital flows during the year.
- In May 2011, ADs were permitted to open noninterest bearing escrow accounts in Indian rupee, towards payment of share purchase consideration or for keeping securities to facilitate FDI transactions without prior approval from the Reserve Bank. This measure was aimed at providing operational flexibility and easing the procedures for such transactions.
- During 2011–2012, qualified foreign investors were allowed to invest in units of MFs, listed equity shares and listed corporate debts, in order to widen the universe of foreign portfolio investors into India and consequently create an environment for more stable portfolio capital inflows into India.
- In 2012, RBI took numerous stringent measures to curb excess volatility of FOREX market that includes: withdrawing the facility of cancellation and rebooking of contracts available under contracted exposure to residents and FIIs; reducing the limit under past performance facility for importers to 25 percent of the current limit available; making the past performance facility available to exporters and importers only on a delivery basis, mandating that all cash/tom/spot transactions by ADs on behalf of clients were to be undertaken for actual remittances/delivery only and could not be cancelled/cash settled.
- To strengthen regional financial and economic cooperation, the SAARC swap arrangement was announced at the 24th SAARC Finance Governors' Meeting held on May 16, 2012. Under the arrangement, the Reserve Bank will offer a swap facility of U.S. $2 billion both in foreign currency and Indian rupee to all SAARC member countries, *viz*., Afghanistan, Bangladesh, Bhutan, Maldives, Nepal, Pakistan and Sri Lanka.
- In 2012–2013, RBI took a step to liberalise the FDI policy, that is, 100 percent FDI in single-brand retail, 51 percent FDI in multibrand retail and 49 percent FDI in power exchanges have been permitted under the government route.
- FIIs are eligible to offer government securities/corporate bonds, cash and foreign sovereign securities with AAA ratings in both the cash and F&O segments as collaterals.
- In 2013, authorised banks have been permitted to open NRO accounts for individual/s of Bangladeshi nationality without the approval of the Reserve Bank of India, subject to certain conditions.
- Aggregate gap limit should not exceed 6 times the total capital (Tier I and Tier II capital) of the bank.
- In cases where nonresidents (including NRIs) invest in an Indian company in compliance with the provisions of the Companies Act, 1956 by way of subscription to Memorandum of Association, the investments may be made at face value subject to their eligibility to invest under the FDI scheme.
- A person who is a citizen of Pakistan or an entity incorporated in Pakistan has been permitted, with the prior approval of the FIPB, to purchase shares and convertible debentures of an Indian company under Foreign Direct Investment (FDI) Scheme provided the Indian company receiving such FDI is not engaged or shall not engage in sectors/activities pertaining to defence, space and atomic energy and sectors/activities prohibited for foreign investment.
- According to the prescribed guidelines, the Net Overnight Open Position Limit may be fixed by the bank's board and communicated to the Reserve Bank immediately. However, such limits should not exceed 25 percent of the total capital (Tier I and Tier II capital) of the bank.

- Exchange Earners Foreign Currency account holders have been permitted to retain 100 percent of their forex earnings, subject to the condition, that the sum total of accruals in the account during a calendar month are converted into rupees on or before the last day of the succeeding calendar month after adjusting for utilisation of the balances for approved purposes or forward commitments.
- ODI in Pakistan by Indian parties has been permitted under the approval route from September 7, 2012.

4.3.7 Recommendations of Raghuram Rajan Committee on Financial Sector Reforms

- The RBI should formally have a single objective, to stay close to a low inflation number, or within a range in the medium term, and move steadily to a single instrument, the short-term interest rate (repo and reverse repo) to achieve it.
- Steadily open up investment in the rupee corporate and government bond markets to foreign investors after a clear monetary policy framework is in place.
- Allow more entry to private well-governed deposit-taking small finance banks offsetting their higher risk from being geographically focused by requiring higher capital adequacy norms, a strict prohibition on related party transactions and lower allowable concentration norms (loans as a share of capital that can be made to one party). Make significant efforts to create the supervisory capacity to deliver the greater monitoring of these banks that will be needed initially, and put in place a tough prompt corrective action regime that ensures that these banks do not become public charges.
- Liberalise the banking correspondent regulation so that a wide range of local agents can serve to extend financial services. Use technology both to reduce costs and to limit fraud and misrepresentation.
- Offer priority sector loan certificates (PSLCs) to all entities that lend to eligible categories in the priority sector. Allow banks that undershoot their priority sector obligations, to buy the PSLC and submit it towards fulfilment of their target.
- Liberalise the interest rate that institutions can charge, ensuring credit reaches the poor, but require (i) full transparency on the actual effective annualised interest cost of a loan to the borrower, (ii) periodic public disclosure of maximum and average interest rates charged by the lender to the priority sector, and (iii) only loans that stay within a margin of local estimated costs of lending to the poor be eligible for PSLCs.
- Sell small underperforming public sector banks, possibly to another bank or to a strategic investor, to gain experience with the process and gauge outcomes.
- Free banks to set up branches and ATMs anywhere.
- Bring all regulations of trading under the SEBI.
- Encourage the introduction of markets that are currently missing such as exchange traded interest rate and exchange rate derivatives.
- Stop creating investor uncertainty by banning markets. If market manipulation is the worry, take direct action against those suspected of manipulation.
- Create the concept of one consolidated membership of an exchange for qualified investors (instead of the current need to obtain memberships for each product traded). Consolidated membership should confer the right to trade all the exchange's products on a unified trading screen with consolidated margining.

- Encourage the setting up of 'professional' markets and exchanges with a higher order size that are restricted to sophisticated investors (based on net worth and financial knowledge), where more sophisticated products can be traded.
- Create a more innovation-friendly environment, speeding up the process by which products are approved by focusing primarily on concerns of systemic risk, fraud, contract enforcement, transparency, and inappropriate sales practices. The threshold for allowing products on professional exchanges or over-the-counter markets should be lower, so that experimentation can take place.
- Allow greater participation of foreign investors in domestic markets. Increase participation of domestic investors by reducing the extent to which regulators restrict an institutional investor's choice of investments. Move gradually instead to a 'prudent man' principle where the institutional investor is allowed to exercise judgment based on what a prudent man might deem to be appropriate investments. Emphasise providing access to suitable equity-linked products to the broader population as part of the inclusion agenda.
- A financial sector oversight agency (FSOA) should be set up by statute. The FSOA's focus will be supervisory: it will monitor the functioning of large, systemically important, financial conglomerates; anticipating potential risks; it will initiate balanced supervisory action by the concerned regulators to address those risks; it will address and defuse interregulatory conflicts; and look out for the build-up of systemic risks.
- The committee recommends setting up the Financial Development Council (FDC) with the Finance Minister as the Chairman. The main focus of this council would be macro risk assessment and developmental issues. The FSOA will be the secretariat for the council.
- Set up an Office of the Financial Ombudsman, incorporating all such offices in existing regulators, to serve as an interface between the household and industry.
- The committee recommends strengthening the capacity of the Deposit Insurance and Credit Guarantee Corporation to both monitor risk and resolve a failing bank, instilling a more explicit system of prompt corrective action and making deposit insurance premia more risk-based.
- The committee outlines a number of desirable attributes of a bankruptcy code in the Indian context, many of which are aligned with the recommendations of the Irani Committee. It suggests an expedited move to legislate the needed amendments to company law.

Various people like Shankar Acharya (2008), Lekha Chakravarty (2008) and Ravimohan (2008) have critically analysed the report on financial sector reforms. The summary of their analysis is as follows:

- The report's treatment of the 'macroeconomic framework' is purely academic and aloof from the realities of the Indian macroeconomic setting and experience. There seems to be little understanding of the potential and possibilities of macroeconomic policy in a developing country with an 'intermediate' exchange rate regime of managed flexibility and partial capital controls.
- The report believes that capital inflows lead to inevitable appreciation of the real exchange rate, leaving the country with 'the Hobson's choice of taking it as inflation or nominal exchange rate appreciation'. This view is, at best, misleading and, at worst, plain wrong. The third and better option, pursued by the government and RBI has been to add to forex reserves and partially sterilise the increment (note that in recent years RBI has added well over $200 billion of reserves while the cumulative MSS bonds outstanding are a little over $40 billion equivalent). This avoids unwanted nominal and real appreciation of the exchange rate as well as inflationary pressure.

- RRR's view of macroeconomics leads it to a surprisingly adventurous recommendation: that 'RBI should have a single objective … of low inflation …'. This recommendation has explained that the RBI should drop the other objectives which currently also inform its policies, namely, the level and growth of the country's economic activity, the nation's financial stability and the level and volatility of the exchange rate, which is generally regarded as the single most important price in a developing country. The report is not particularly educative on who should take on these responsibilities and how, especially given the well-known constraints on countercyclical fiscal policy in India. We can note that the world's largest economy with, arguably, the most developed financial system, that is, the United States, mandates its central bank to pursue multiple objectives.
- In pursuit of the worthy goal of greater financial inclusion, the committee recommends resurrection of small, local area private banks. The dangers of capture by local private-political vested interests are noted by the committee, but it nevertheless considers the initiative worthwhile.
- Turning to the report's discussion of the regulatory structure, it has submitted a couple of unusual proposals. The first is for a statutory FSOA, composed of 'chiefs of regulatory bodies' and armed with a 'permanent secretariat' to 'monitor … large, systemically important financial conglomerates, … defuse inter-regulatory conflicts', and so on, the committee hugely underestimates the dangers of spawning a new regulatory institution in a country which loves such multiplication and where bureaucratic turf battles usually take precedence over problem-solving. If the issue is interregulatory coordination, it is not obvious that an FSOA will provide anything more than another venue for discord. A better solution, generally favoured the world over, is to accord primary authority to the central bank and sort out coordination and overlap issues through semiformal institutions such as the High Level Committee on the capital market (chaired by the RBI Governor), with occasional recourse to the finance minister to resolve particularly knotty issues (Acharya, 2008).
- The recommendation about the proposed FDC, to be chaired by the finance minister, to handle 'macrorisk assessment and developmental issues' has been misleading. Once again, the danger is of bureaucratisation and excessive governmental control over relatively autonomous financial sector regulatory institutions. Better to stick with the present system where ministerial direction and guidance is conveyed through less structured channels. Incidentally, it would be good to know which other countries boast similar institutions (as the proposed FSOA and FDC) and how they have worked in practice. Similarly, the proposal for more formal Parliamentary oversight of time-bound, structured mandates to regulators may lead to far more pervasive and intrusive political intervention in the discharge of professional regulatory responsibilities, RRR may have foreseen. One should tread very cautiously in this domain.

Some of the important initiatives taken in the recent past are summarised below:

Establishment of NITI Aayog: The NITI (National Institution for Transforming India) Aayog was established by the Central Government in January 2015 to replace the Planning Commission. The NITI Aayog, with the Prime Minister as its Chairperson, is expected to provide strategic and technical advice to the states on various issues.

New 5-Year Foreign Trade Policy (FTP) for 2015–2020: The new 5-year foreign trade policy (FTP) for 2015–2020 was unveiled, with a framework for increasing export as well as the generation of employment, and increasing value addition in the country, in keeping with the 'Make in India' vision. It introduced two new schemes: 'Merchandise Exports from India Scheme' for the export of specified goods to specified markets, and 'Service Exports from India Scheme' for increasing the exports of notified services.

Gold Monetisation Scheme: The Union Cabinet approved the introduction of the Gold Monetisation Scheme, as announced in the 2015–2016 Union Budget. The scheme aims to mobilise the gold held by households and institutions in the country, and to use this gold productively. The long-term objective of the scheme is to reduce the country's reliance on the import of gold to meet domestic demand.

Pradhan Mantri Jan Dhan Yojana (PMJDY): The government launched the PMJDY in August 2014. The PMJDY aims to promote financial inclusion by providing each household with a bank account. The PMJDY proposes to channel all central, state and local government benefits to the beneficiaries through these bank accounts.

4.4 IMPACT OF FINANCIAL REFORMS

What has been the impact or effectiveness of the reforms listed above? Have they achieved their objectives? Is their theoretical basis unassailable? We shall briefly appraise the reforms by discussing these issues.[2]

The reform process appears to have yielded some positive results at least in the banking sector as reflected in (a) the relatively cleaner balance sheets of banks, (b) reduction in non-performing assets (NPAs) in relative terms, (c) improvement in operating profits, and (d) fairly good progress in attaining capital adequacy ratio and other prudential norms.

The operating profits of the commercial banks have increased. The non-performing assets as a percentage of their total advances have declined from 12.7 percent to 3.8 percent for all scheduled commercial banks.

The asset quality of the Indian banking system has improved significantly over the past two decades. Similar trend can also be seen in the net NPAs ratios during the same period, reflecting better recoveries by banks and better allocation of funds. There has been a distinct improvement in the recovery climate in recent years facilitated by strong macroeconomic performance and institutional measures initiated by the Reserve Bank/ Government. It is also significant to note that the asset quality of public sector banks has been better than private sector banks—both old and new—in terms of net NPL (i.e. net of provisioning).

The financial performance of SCBs had also improved during the recent past as reflected in their profitability. The impact of greater competition and improved efficiency of the Indian banking system could also be seen from the significant reduction in interest spread over the reform period.

Improvements in efficiency of the banking system are also reflected, *inter alia*, in costs of intermediation (i.e. the ratio of operating expense to total assets) witnessed a gradual reduction in the postreform period across various bank groups barring foreign banks. However, intermediation costs of banks in India still tend to be higher than those in developed countries. Similarly, the cost income-ratio (defined as the ratio of operating expenses to total income less interest expense) of Indian banks has shown a declining trend during the postreform period. For example, Indian banks paid roughly 45 percent of their net income towards managing labour and physical capital in 2004 as against nearly 72 percent in 1993 (Mohan, 2006a). Indian banks thus recorded a net cost saving of nearly 27 percent of their net income during the postreform period.

[2]Also see Bhole, L.M., "A Perspective on Financial Restructuring in India" in Atmanand (ed.), Globalisation and Dimensions of Management in India, *Shipra*, New Delhi, 1997; "Futures, Options, and Other Financial Innovations in India", *Productivity*, July-September 1994; and "The Indian Capital Market at Crossroads", *Vikalpa*, April–June 1995.

What is most encouraging is the very significant improvement in the productivity of the Indian banking system, in terms of various productivity indicators. Branch productivity also recorded concomitant improvements. These improvements could be driven by two factors: technological improvement, which expands the range of production possibilities and a catching-up effect, as peer pressure amongst banks compels them to raise productivity levels. Here, the role of new business practices, new approaches and expansion of the business that was introduced by the new private banks has been of the utmost importance.

One of the major objectives of banking sector reforms was to enhance efficiency and productivity through increased competition. That the competition has intensified could be gauged from the decline in the share of public sector banks in the total income, expenditure and assets of the commercial banking system since the mid-1990s, and increase in the share of new private sector banks. The process of consolidation has also been taking place in India. Bank mergers have taken place in India mostly with the objective to synergise the strength of the merging institutions. Broad guidelines have been laid down by RBI for mergers for private sector banks from a regulatory and prudential perspective and these guidelines apply to public sector banks *mutatis mutandis* and to the extent relevant.

Derivatives play a critical role in shaping the overall risk profile of banks. Over the years, banks have been increasingly using derivatives for managing risks and have also been offering these products to corporates. The Reserve Bank has issued several guidelines to banks from time to time on various derivative instruments. In view of the growing complexity, diversity and volume of derivatives used by banks, an Internal Group has been constituted by the Reserve Bank to review the existing guidelines on derivatives and formulate comprehensive guidelines on derivatives for banks. These guidelines are intended to cover broad generic principles for undertaking derivative transactions, management of risk and sound corporate governance requirements. The draft guidelines were placed on the Reserve Bank's website in December, 2006. The feedback received on the guidelines is being examined by the Internal Group and the draft guidelines are in the process of finalisation.

Risk management practices of banks in India have undergone considerable improvement over the past few years with the introduction of the financial sector liberalisation process in the mid-1990s. The process gained momentum with the issue of regulatory guidelines and guidance notes on asset liability management and management of credit risk, market risk and operational risk by the Reserve Bank since 1999. Further, the announcement of implementation of the revised capital adequacy framework in India with effect from March 31, 2007 has brought the risk management capabilities of banks into greater focus.

Globally, banks are increasingly relying on statistical models to measure and manage the financial risks to which they are exposed. These models are gaining credibility because they provide a framework for identifying, analysing, measuring, communicating and managing these risks. Since models cannot incorporate all possible risk outcomes and generally are not capable of capturing 'event risks' and sudden/dramatic changes, banks need to supplement models with 'stress tests'. Internationally, stress testing has become an integral part of banks' risk management systems and is used to evaluate the potential vulnerability to certain unlikely but plausible events or movements in financial variables. There are broadly two categories of stress tests used in banks, *viz*., sensitivity tests and scenario tests. These may be used either separately or in conjunction with each other.

Banks in India are beginning to use statistical models to measure and manage risks. Further, the supervisory review process under Pillar 2 of Basel II framework is intended not only to ensure that banks have adequate

capital to support all the risks in their business, but also to encourage banks to develop and use better risk management techniques in monitoring and managing their risks. Banks must demonstrate, under the internal capital adequacy assessment process prescribed by Pillar 2, that they have enough capital to not only to meet the minimum capital requirements but also to withstand a range of severe but plausible shocks. In the above background, the need for banks in India to adopt 'stress tests' as a risk management tool is being emphasised by RBI. Considering the drawbacks of BASEL II, the BASEL III framework has been released entitled as 'A Global Regulatory Framework for more Resilient Banks and Banking Systems', in December 2010. It has two main objectives such as (i) to strengthen global capital and liquidity regulations with the goal of promoting a more resilient banking sector, and (ii) to improve the banking sector's ability to absorb shocks arising from financial stress. The enhancements of Basel III over Basel II come primarily in four areas: (i) augmentation in the level and quality of capital; (ii) introduction of liquidity standards; (iii) modifications in provisioning norms; and (iv) introduction of leverage ratio.

Inflation has averaged close to 5 percent per annum in the decade gone by, notably lower than that of 8 percent in the previous four decades. Structural reforms since the early 1990s coupled with improved monetary-fiscal interface and reforms in the Government securities market enabled better monetary management from the second half of the 1990s onwards. More importantly, the regime of low and stable inflation has, in turn, stabilised inflation expectations and inflation tolerance in the economy has come down. It is encouraging to note that despite record high international crude oil prices, inflation remains low and inflation expectations also remain stable.

Reflecting the strong growth prospects of the Indian economy, the country has received large investment inflows, both direct and portfolio, since 1993–1994 as compared with negligible levels till the early 1990s. Total foreign investment flows (direct and portfolio) increased from ₹185 crores in 1990–1991 to ₹2,16,510 crores in 2013–2014. Over the same period, CADs remained modest—averaging one percent of GDP since 1991–1992 and in fact recorded small surpluses during 2001–2004. With capital flows remaining in excess of the current financing requirements, the overall balance of payments recorded persistent surpluses leading to an increase in reserves. Despite such large accretion to reserves, inflation could be contained reflecting appropriate policy responses by the Reserve Bank and the Government.

The composition of India's balance of payments has undergone significant change since the mid-1990s. In the current account, the growth of software exports and, more recently, of business process outsourcing, has increased the share of service exports on a continuing basis. Even more significant is the growth in remittances from NRIs. The latter exhibit a great deal of stability. The remittances appear to consist mainly of maintenance flows that do not seem to be affected by exchange rate, inflation, or growth rate changes. Thus, the Indian current account exhibits only a small deficit. On the capital account, unlike other emerging markets, portfolio flows have far exceeded FDI in India in recent years. Coupled with other capital flows consisting of official and commercial debt, NRI deposits, and other banking capital.

The downturn in the Indian business cycle during the early part of this decade led to the emergence of a current account surplus, particularly because the existence of the relative exchange rate in sensitive remittance flows. Consequently, foreign exchange reserves grew by more than US$ 360 billion in 2015–2016. With the introduction of the MSS, the cost in terms of interest payments would be borne by the government itself in a transparent manner. It is relevant to note that the MSS has provided the Reserve Bank the flexibility to not only absorb liquidity but also to inject liquidity in case of need. This was evident during the second half of

2005–2006 when liquidity conditions became tight in view of strong credit demand, increase in Government's surplus with the Reserve Bank and outflows on account of bullet redemption of India Millennium Deposits (about US$ 7 billion). In view of these circumstances, fresh issuances under the MSS were suspended between November 2005 and April 2006. Redemption of Securities/Treasury Bills issued earlier—along with active management of liquidity through repo/reverse repo operations under Liquidity Adjustment Facility–provided liquidity to the market and imparted stability to financial markets. With liquidity conditions improving, it was decided to again start issuing securities under the MSS from May 2006 onwards. The issuance of securities under the MSS has thus enabled the Reserve Bank to improve liquidity management in the system, to maintain stability in the foreign exchange market and to conduct monetary policy in accordance with the stated objectives.

The Indian experience highlights the need for emerging market economies to allow greater flexibility in exchange rates but the authorities can also benefit from having the capacity to intervene in foreign exchange markets in view of the volatility observed in international capital flows. A key lesson is that flexibility and pragmatism are required in the management of the exchange rate and monetary policy in developing countries, rather than adherence to strict theoretical rules. As inflation, along with inflation expectations, fell during the earlier period of this decade, policy interest rates were also brought down. Consequently, both nominal and real interest rates fell. Such decline in interest costs has significant implications for the improvement in bottom lines of the corporates. Various indicators pertaining to interest costs, which can throw light on the impact of interest costs on corporate sector profits, have turned positive in recent years.

The nonperforming assets of NBFCs have increased substantially in the immediate past. After a brief period of great strides, the MF industry has come to be afflicted by a host of serious problems. The funds mobilised by them have declined drastically over the reform period. The net asset values of their various schemes have declined and are now below par (see chapter on Mutual Funds). The volume of fresh capital raised on the primary stock market has declined significantly. The secondary market reforms have not really progressed because of the recalcitrance of market operators' and SEBI's lack of will. The stock markets are plagued by uncommonly high number of drawbacks, weaknesses, malpractices and so on. Both the primary and secondary markets have remained depressed. The annual average rate of return on the stock market and other financial markets has declined, and there has not been much gain in terms of reduction in volatility of prices and return; in fact, volatility has increased. The stockmarket continues to be highly speculative (see chapters on SEBI, and Industrial Securities Market).

Financial liberalisation has heightened competition among banks, and between banks and other financial institutions. But competition has engendered certain serious problems. For example, the distinction between commercial banking, investment banking, development banking, other specialised institutions and manufacturing corporates is getting blurred. Banks are entering into para-banking and other financial services; development financial institutions, MFs and insurance companies are entering into banking and each other's fields; and manufacturing corporates are entering into banking and financial activities. As a result, 'universal banking' or 'one stop banking' is emerging in our country, as elsewhere. There has been an emergence of mega financial institutions, financial giants and financial conglomerates with tremendous economic power, which may achieve economic efficiency but which could also abuse such a power. Financial reforms have given rise to new issues of financial industry structure, systemic or social costs of oligopoly and difficulties of supervision of such a structure.

The market-based exchange rate system has helped to open up the Indian economy, and to integrate it with the rest of the world. But the exchange rate has become far more volatile; it has become subject to severe external pressures; its management has become difficult; and there has been a partial loss of autonomy of domestic monetary policy. At the same time, the substantial capital inflows in any form have not actually materialised (see chapters on Foreign Exchange Market and Foreign Capital Flows).

Financial sector reforms ought to involve a normative approach, a vision about how the financial system should be rather than how it will be a few years hence. The reforms in India have lacked such normative perspective; they are characterised by an ideological overload; and they appear to have imitated the fashions or trends abroad. There is also a widespread feeling that they have not been spontaneous, that is, they have been dictated by external bodies. In this connection, it is worth noting that many analysts in the United States describe the process of financial reforms in developing countries like India as the 'Americanisation of finance'.

The financial sector reforms have quickened the pace of structural transformation of the IFS, but all is not well with it; there is a dark side to its development during the reform period. Though many have referred to the reforms *ad nauseam*, and in spite of their high visibility, the state of the IFS in 2003 is perhaps worse than its state in 1991. Its quantitative growth, as in the past, continues to hide its qualitative regress. The 'state of credit' or 'the state of confidence' happens to be at its nadir today. The IFS was sick and it continues to be sick after seven years of reforms. The pathology of scams and frauds of various dimensions, as reflected in the MS shoe case, and in the failure of Indian Bank, CRB capital markets and certain co-operative banks, continues to afflict the IFS.

In other words, in assessing the reforms, the answer would depend upon the criteria used. They are mostly assessed in terms of financial, commercial and economic criteria, which is not enough. The broader sociopolitical and meta-economic criteria are mostly set aside. If we take into all the relevant criteria, can it be said that the IFS has performed significantly, exceedingly better after reforms than before? The objective, honest, non-ideological answer to such a question is negative. The official assessment has mostly tended to be in the nature of convenient interpretation and belaboured defence. But even officially, nonbanking financial intermediaries have experienced an imperceptible improvement after reforms. It is also officially accepted that the performance of urban and other co-operative banks has deteriorated even in terms of asset quality and profitability. The same is true in the case of DFIs and MFs so much so that the UTI had to be dismembered. The domestic saving and investment rates have stagnated; the public sector saving rate has become negative. The credit delivery mechanism has continued to be inefficient. The fiscal situation has deteriorated; internal debt and interest payment of the central and state governments have tended to reach unsustainable levels, and there has been little improvement in deficit/GDP ratio. The exchange rate has depreciated, and foreign exchange reserves have increased to an excessively high level. The vulnerability of the IFS to the external stocks has increased. It has been argued that the postreform deficiencies have been the result of (a) fall out of East Asian crisis, (b) global economic slow down, (c) downward spiral in global assets markets, (d) uncertainty in the global oil market, (e) severe draught in 2002 and (f) rigidities in the fiscal structure. The question which can be asked is that if the reforms are worldwide, why has the world economy performed poorly? It has been claimed that the reforms in the external sector have been successful. The depreciation of the rupee and its increased volatility certainly do not show this. The high exchange reserves can be said to be a sign of success in the manner of unprecedentedly high stocks of foodgrains in the middle of hunger, destitution and poverty which are a sign of success.

According to Stiglitz (1999), misguided deregulation policies have been at the centre of many of the weaknesses in East Asian and developing countries. Eliminating capital controls across the board and relying on imperfect capital adequacy requirements to curtail the risk exposure of the financial sector leads to increased instability and to a higher likelihood of systemic crises which have devastating effects on the poor. The developing countries need to create regulatory structures that encourage safe, sound, accountable and transparent financial markets. There is a clear role for the governments to mitigate tendencies for excessive borrowings by both banks and corporates. The bankruptcy laws need to be put in place. The efficient social safety nets also need to be put in place to insure the poor against the risk of loss of incomes during the crisis.

The experience in the United States in the recent past does not show the philosophy of liberalisation in favourable light. The United States experienced the largest sustained bull market during 1990s which was not really related to fundamentals and which was 'irrational exuberance'. The private, free corporate America experienced widespread, serious irregularities, scandals, mismanagement, malfeasance and so on. A series of corporate wrongdoings, manipulations and accounting misstatements by giants like Enron, Xerox, World Com., Merck, General Electricals, Tyco, Inclone, Accounting and Audit Firms has resulted in the total erosion of confidence of investors in Corporate America, and America's free market economy is being shaken at its foundation due to this loss of confidence. The investors are staying away from the market. From its peak in 2000, Nasdaq has crashed so much that its survival itself is in question now. The United States MFs industry is being investigated for the suspicion that it has indulged in unethical and illegal practices. The 800-strong MFs sector has not been scandal-free.

The private sector corporate America has been in crisis since the beginning of 2001. Not a handful of companies but as many as 30 'renamed' companies are involved, and which has shocked the government and the public confidence is at its lowest since 1981. Bad bookkeeping, accounting and auditing lapses, tempering evidence, evading taxes, booking questionable revenues, insider trading, obstruction of justice, disclosure failures, overstating performance and revenues and irregularities in IPO allocation are some of the ethical, moral lapses on the part of corporates in America which have come to light. The American policy makers are now emphasising the need for many stringent rules and regulations (reforms?) to extricate the economy out of this morass. It can be said that we are witnessing the phenomenon of 'reforming the reformer'. The developments in U.S. have certainly put a very big question mark on the philosophy (ideology) of 'Americanisation of the world finance'.

4.5 VIEWS FROM ABROAD AGAINST FINANCIAL LIBERALISATION

LO 3

Review critically some of the views from abroad against financial liberalisation

While appraising financial sector reforms in India, it would be useful to take a critical look at some of the views from abroad against (in favour of) financial liberalisation (financial repression). The 'new structuralists' have pointed out that the major effect of financial reforms in different countries (*viz*., South Korea) has been to effect a significant shift of savings from the informal to formal financial markets without any increase in the volume of savings. Since informal markets have an advantage of lower overhead costs which outweighs their disadvantages such as narrow information base and a limited capacity for risk-pooling, this shift cannot be regarded to have been good.

The financial systems are of two types: 'capital market-based' or 'direct' or 'securitised' and 'credit-based' or 'indirect' or 'intermediaries-based' systems. It has been argued, and in our view rightly, that the second type of system prevails in developing countries. In such a system, unlike in the stock market—dominated system, investment is faster, is least affected by speculative activity and is not biased towards short-term profitability. Further, in such a system, government-directed credit programmes have certain advantages (*viz*., implementing development strategy better), and, therefore, they need not be frowned upon as is done under deregulation paradigm.

It has been further argued by some that state-dominated credit-based system operates as a *de facto* 'internal capital market' which is more efficient than the private capital market because, in it, the state cultivates a long-term and close relationship with the borrowing firms, and the resulting atmosphere of trust and co-operation makes lender-monitoring effective and efficient, which, in turn, reduces transaction costs also.

It should be noted that while providing valuable insight into the working of financial markets, the above-given arguments appear to be advocating state intervention and financial repression. But we need not really swing back to favouring financial repression because financial liberalisation has not worked or cannot work. The 'credit-based system' need not necessarily be a 'state-owned or state-regulated credit-based system'; the advantages of the credit-based system do not hinge upon the existence of state controls. The minimisation of transactions costs is not unique to a state-controlled financial system. The choice is not really between financial liberalisation of *laissez faire* or free-market vintage, and financial repression. The real financial reform consists in building up a decentralised financial system with minimum overseeing by the state. This paradigm of financial reforms is qualitatively superior to the conventional paradigms of 'competition with prudential regulation' or 'small versus large repression'.[3]

4.6 FUTURE CHALLENGES FOR INDIAN FINANCIAL SECTOR

LO 4

Understand the challenges facing the Indian financial sector

A few broad challenges facing the Indian financial sector are: threats of risks from globalisation; implementation of Basle III; improvement of risk management systems; implementation of new accounting standards; enhancement of transparency and disclosures; enhancement of customer service; and application of technology. The implementation of these reforms has also involved the setting up or improvement of key financial infrastructure such as payment and settlement systems and clearing and settlement systems for debt and forex market functioning.

- The Basel III which is to be implemented by banks in India as per the guidelines issued by RBI from time to time will be challenging task not only for the banks but also for GOI. It is estimated that Indian banks will be required to raise ₹6,00,000 crores in external capital in next nine years or so, that is, by 2020. Expansion of capital to this extent will affect the returns on the equity of these banks especially public sector banks. However, only consolation for Indian banks is the fact that historically they have maintained their core and overall capital well in excess of the regulatory minimum. But now it is too difficult for the Indian banks to maintain the capital ratio according to Basel III norms because now-a-days banks are not getting high profit due to high NPAs and other market conditions. And in other way

[3]See Bhole, L.M., *op. cit*.; and Rangarajan, C., "Financial Sector Reforms: The Indian Experience", *Reserve Bank of India Bulletin*, July 1997, pp. 556–557.

raising equity is also a difficult task for the Indian banks by which they can accumulate capital. So it is a very challenging task for the Indian banks to raise capital and maintain the capital ratio according to BASEL III norms.

- It is widely acknowledged that implementation of Basel III poses significant challenge to both banks and the regulators. Basel III implementation may also be seen as a compliance challenge. But at the same time, it offers two major opportunities to banks, *viz.*, refinement of risk management systems and improvement in capital efficiency. The transition from Basel II to Basel III essentially involves a move from capital adequacy to capital efficiency. This transition in how capital is used and how much capital is needed will become a significant factor in 'return on equity' strategy for years to come. The reliance on the market to assess the riskiness of banks would lead to increased focus on transparency and market disclosure, critical information describing the risk profile, capital structure and capital adequacy. Besides making banks more accountable and responsive to better-informed investors, these processes enable banks to strike the right balance between risks and rewards and to improve the access to markets. Improvements in market discipline also call for greater coordination between banks and regulators.
- Basel III has brought into focus the need for a more comprehensive risk management framework to deal with various risks, including credit and market risk and their interlinkages. Banks in India are also moving from the individual silo system to an enterprise-wide risk management system. While the first milestone would be risk integration across the entity, the next step would entail risk aggregation across the group both in the specific risk areas as also across the risks. Banks would, therefore, be required to allocate significant resources towards this endeavour. In India, the risk-based approach to supervision is also serving as a catalyst to banks' migration to the integrated risk management systems. However, taking into account the diversity in the Indian banking system, stabilising the RBS as an effective supervisory mechanism is another challenge.
- The waves of globalisation are sweeping across the world and have thrown up several opportunities accompanied by concomitant risks. Integration of domestic market with international financial markets has been facilitated by tremendous advancement in information and communications technology. There is a growing realisation that the ability of countries to conduct business across national borders and the ability to cope with the possible downside risks would depend, *inter alia*, on the soundness of the financial system. This has necessitated convergence of prudential norms with international best practices as well consistent refinement of the technological and institutional framework in the financial sector through a nondisruptive and consultative process.
- The microfinance industry (MFI) in India is witnessing some unhealthy competition and usurious rates of interest. The intense competition also led to what is called 'client hijacking'. The industry with its potential is going much beyond the self-help group (SHG) concept and is increasingly becoming commercial with the growth of for-profit microfinance institutions. As the success of Bangladesh Grameen Bank model indicated, it is not the cost of credit but its availability that is important for the economically weaker sections of the society; but usurious rates of interest would mean the revisit of traditional money lenders. Some amount of regulation could be thought about and this would be best done by linking it to some sort of credit guarantee mechanism to protect the microfinance institutions against genuine defaults—as the average loan size is small and may not pose a big moral hazard.
- Despite the IT skills the country boasts of, the penetration of IT in the banking sector has still a long way to go. As there is a pertinent need to reduce the overheads, the banking penetration is best achieved

through use of technology. The number of ATMs in India, per million population, which is around 10, compares poorly with even many Asian countries. The national financial switch operated by the IDRBT endeavours to provide cross connectivity to all the banks so that customers could access any ATM despite having accounts with a particular bank. However, there is a need to increase the number of ATMs so that the banks could cater to most of the retail banking needs of the customers without human intervention which in turn could improve their efficiency through reduction of overheads.

- The financial landscape is increasingly witnessing entry of some of the bigger banks into other financial segments like merchant banking, insurance and so on. Emergence of several new players with diversified presence across major segments makes it imperative for supervision to be spread across various segments of the financial sector. In this direction, an interregulatory working group was constituted with members from RBI, SEBI, IRDA and PFRDA. The framework proposed by the group is complementary to the existing regulatory structure, wherein the individual entities are regulated by the respective regulators and the identified financial conglomerates are subjected to focussed regulatory oversight through a mechanism of interregulatory exchange of information. As a first step in this direction, an interagency working group on Financial Conglomerates (FC) comprising the above three supervisory bodies identified 23 FCs and a pilot process for obtaining information from these conglomerates has been initiated. The complexities involved in the supervision of financial conglomerates are a challenge not only to the Reserve Bank of India but also to the other regulatory agencies, which need to have a close and continued coordination on an on-going basis.
- To a large extent, many risk management failures reflect a breakdown in corporate governance which arise due to poor management of conflict of interest, inadequate understanding of key banking risks and poor board oversight of the mechanisms for risk management and internal audit. Corporate governance is, therefore, the foundation for effective risk managements in banks and, thus, the foundation for a sound financial system. Therefore, the choices which banks make when they establish their risk management and corporate governance systems have important ramifications for financial stability. Banks may have to cultivate a good governance culture, building in appropriate checks and balances in their operations.
- There are four important forms of oversight that should be included in the organisational structure of any bank in order to ensure appropriate checks and balances: (i) oversight by the board of directors or supervisory board; (ii) oversight by individuals not involved in the day-to-day running of the various business areas; (iii) direct line supervision of different business areas; and (iv) independent risk management, compliance and audit functions. In addition, it is important that key personnel are fit and proper for their jobs. Furthermore, the general principles of sound corporate governance should also be applied to all banks, irrespective of their unique ownership structures.
- While banks are focusing on the methodologies of meeting the increasing demands placed on them, there are legitimate concerns with regard to the banking practices that tend to exclude rather than attract vast sections of population, in particular pensioners, self-employed and those employed in the unorganised sector. While commercial considerations are no doubt important, banks have been bestowed with several privileges, especially of seeking public deposits on a highly leveraged basis, and consequently they should be obliged to provide banking services to all segments of the population, on equitable basis. Further, experience has shown that consumers' interests are at times not accorded full protection and their grievances are not properly attended to. Feedback received reveals recent trends of levying unreasonably high service/user charges and enhancement of user charges without proper and prior intimation. It is in

this context that the Governor, Reserve Bank of India, had mentioned in the Annual Policy Statement 2005–2006 that RBI will take initiatives to encourage greater degree of financial inclusion in the country; setting up of a mechanism for ensuring fair treatment of consumers; and effective redressal of customer grievances.

- With deregulation of interest rates, in the absence of well-developed derivative market especially for the interest rate products, banks cannot effectively perform the task of maturity transformation. The only alternative left with them is to manage their balance sheets within a narrow framework of asset liability matching and this constraints their growth. On the other hand, the regulatory discomfiture emerges from the way some banks are selling complex derivative products which the clients do not understand properly. While innovation is good, aspects like sustenance of market interest in a product or credibility of the innovator is sometimes thrown to winds. Apart from such regulatory stance as to make it obligatory on the part of the seller of a derivative product to do a due diligence on the clients' ability to assess and manage risks by purchasing that product, encouraging financial education could solve these problems to a great extent.
- Financial education can make a difference not only in the quality of life that individuals can afford, but also the integrity and quality of markets (Reddy, 2006). Financial literacy is a matter of public policy and it also enhances the supervisory capacity. On the other hand, since these nonstandard structures happen more on the OTC markets, promoting exchange-traded derivatives is a viable option.
- In the equity markets, despite the progresses made, the issue of investor protection is yet to be addressed in a substantial manner. While market discipline through its influence on equity prices has brought in a great amount of change in corporate governance, the small investor still faces difficulties with respect to fly-by-night operators.
- The reaction on the part of the stock exchanges in delisting an erring company might not be the right response since it hurts the investors more than the promoters. Besides, there is more that needs to be done by the regulators with regard to price manipulation. Apart from installing the best electronic surveillance mechanism to track online trade flows, what the authorities need to do is to build necessary skills within to address sophisticated financial crimes and to act promptly to thwart major scams. An immediate requirement would be a functioning stock lending mechanism and an introduction of short sales. We have seen the resilience of the stock markets and the maturity, but still unable to accept the boom-bust cycles. The responses to a sharp fall in the equity markets has to be the same as when there is a sharp rise because both contribute to volatility. Stronger and healthier financial system could only create such policy equanimity.
- As McKinsey & Co noted that despite India's Anglo Saxon legal and institutional heritage, the country's corporate bond market is underdeveloped. Despite the talk about the equity markets in day-to-day life, we all know that the bond markets are more important than the equity market as a source of finance. Credit portfolios do not offer the flexibility that is offered by the bond portfolios in balance sheet management; further credit portfolios are much more procyclical as they shrink and expand in size along with the changes in the economic cycles. Credit derivatives offer initial solutions for a transition from a credit-based financing to bond financing. The speedy reforms in the pension and insurance sector and radical improvements in credit enhancement mechanisms could foster the development of bond markets, especially with a rapid growth in mortgage and infrastructure financing.

- The Committee on Fuller Capital Account Convertibility (Chairman: Shri S.S. Tarapore) observed that under a full capital account convertibility regime, the banking system would be exposed to greater market volatility, and this necessitated enhancing the risk management capabilities in the banking system in view of liquidity risk, interest rate risk, currency risk, counterparty risk and country risk that arise from international capital flows. The potential dangers associated with the proliferation of derivative instruments—credit derivatives and interest rate derivatives also need to be recognised in the regulatory and supervisory system. The issues relating to cross-border supervision of financial intermediaries in the context of greater capital flows are just emerging and need to be addressed. In this context, managing exchange rate volatility would continue to be an issue requiring attention.
- On the production side, industrial expansion has accelerated; merchandise trade growth is high; and there are vast demands for infrastructure investment, from the public sector, private sector and through public–private partnerships. Furthermore, it is the service sector that has exhibited consistently high growth rates: the hospitality industry, shopping malls, entertainment industry, medical facilities, and the like, are all expanding fast. Thus, a great degree of diversification is taking place in the economy and the banking system has to respond adequately to these new challenges, opportunities and risks.

To conclude, as we liberalise first the financial sector further to see more FDI and later the external sector towards full capital account convertibility, these are at the least, some important challenges to be addressed. The banking sector alone contributes around 2.5 percent of the GDP and employs around a million people. India has the wherewithal to emerge as another important financial centre in this part of the world, with established high quality human capital and IT skills. However, one needs to appreciate Governor Reddy's remarks that the pace of financial sector deregulation has to be synchronised with sectoral and fiscal reforms. Going forward, the financial sector in India would progress through a combination of competition, consolidation and convergence.

SUMMARY

- Financial sector reforms have been necessitated by an alarming increase of sickness in the IFS, which, in turn, has been caused, *inter alia*, by the state policy-induced rigidities, directed credit allocation and investments and politicisation of the working of financial institutions.
- The main objectives of these reforms have been (a) to develop a competitive, world-integrated, autonomous, viable, vibrant IFS; (b) to increase its allocative efficiency; and (c) to accelerate the rate of growth of the real sector.
- Reforms have encompassed banks, stockmarkets, government securities market, external sector, institutional development and operational as well as monetary policy matters.
- Reforms have had a positive impact on the working of commercial banks as reflected in their cleaner balance sheets, reduction in NPAs and increase in operating profits as well as capital base.
- Reforms have also improved the health of the IFS as a whole. All the segments of IFS—NBFCs, stock market, MFs and so on—have developed in the reform period.
- The pathology of scams and frauds of various magnitudes continues to afflict the IFS even after the reforms.
- While the instrumental objectives of the reforms have been largely achieved, many of their crucial end-objectives are yet to be achieved.

- Some critics of the reforms from abroad have advocated state intervention or financial repression because financial liberalisation has not worked and it theoretically cannot work. Such a swing back is neither necessary nor desirable. The paradigm of financial reforms which stresses the building up of a decentralised financial system is superior to the conventional paradigm of 'competition with prudential regulation' and 'small versus large repression'.
- The future agenda for FSR should include: (a) improvement in the organisational effectiveness and risk management by all financial entities; (b) reduction in the settlement cycle on the stock exchanges and abolishing the carryforward system; (c) introduction of securities transactions tax, circuit breakers and graded capital gains tax in respect of securities trading; (d) drastic reduction in the external debt of the country; (e) building up of decentralised capital and credit markets comprising unit banks, informal credit system, primary credit co-operatives and self-help groups in rural as well as urban areas; and (f) nurturing of a philosophy of ethical finance through conscious and systematic efforts for people's education.
- The concept of self-regulation has become one of the important issues to attain high growth rate and stability and this will be effective when the market will be systematic and free from asymmetric information.

KEY TERMS

New Economic Policy	Basle-III	Second Generation Reforms
Americanization of Finance	Liquidity Adjustment Facility	Negotiated Dealing System
NITI Aayog	Direct Financial System	Gold Monetization Scheme
Indirect Financial System	Pradhan Mantri Jan Dhan Yojana	New Generation of Reform

QUESTIONS

1. Why the financial system reforms have received special attention as a part of macroeconomic policy and highlight the various objectives of the New Economic Policy in India?
2. What are the major policy changes have been taken place in India during the period of liberalisation in the financial sector?
3. Write the important reforms that have taken place in the following sectors/markets during the period 1991–2003.
   (i) Banking sector reforms
   (ii) Primary and secondary stock market
   (iii) Government securities market
   (iv) External financial market
4. Critically appraise the reforms in all the markets.
5. What constitutes the future agenda for reforms in India?

6. What are the future challenges for development of Indian financial system?
7. What is financial self-regulation and how it is useful for the Indian financial system?
8. What is second generation of reform? Explain it in the context of India.
9. Critically discuss about the recommendations of Raghuram Rajan Committee's Report on Financial Sector Reforms.

Part 2

Financial Regulations and Regulatory Institutions in India

Financial regulation is necessary because in its absence economic cost increases due to the market failure. Financial regulation in its broader sense includes establishing specific rules for the smooth functioning of the financial institutions and markets. In India there are many regulatory institutions like the Reserve Bank of India (RBI), Securities and Exchange Board of India (SEBI), Insurance and Regulatory Development Authority of India (IRDAI) and Pension Fund Regulatory Development Authority (PFRDA). The chapters in this part are devoted to the discussion of the working of all these regulatory cum promotional institutions in India.

CHAPTERS

5. Financial Regulations in India

6. The Reserve Bank of India

7. Other Regulatory Institutions in India: SEBI, IRDA and PFRDA

Financial Regulations in India

5
CHAPTER

Learning Objectives

- **LO 1** Know several theories of regulation
- **LO 2** Recognise the four regulatory approaches
- **LO 3** Compare single versus multiple regulators
- **LO 4** Discuss in detail various acts related to financial sector regulations in India
- **LO 5** Explain the concept of financial self-regulation, its features, benefits and limitations

5.1 INTRODUCTION

The regulatory and supervisory infrastructure plays a critical role in ensuring the health, soundness and stability of the financial system. The role of such infrastructure or arrangements has become all the more greater with continuous and far-reaching technological progress, liberalisation and greater integration in financial markets. This infrastructure lays down the specific rules of behaviour for participants in the financial system, it provides for the monitoring of the observance of those rules. The financial regulation is regarded necessary because, in its absence, economic costs imposed by financial market failure would be high indeed. Regulation in its broadest sense includes establishing specific rules of behaviour, or regulatory aspect *per se*, monitoring or tracking observance of behaviour; and supervision or oversight of the compliance with specific rules in the overall behaviour along with disincentives and penal provisions for non-compliance. Regulation is taken to mean the employment of legal instruments for the implementation of social-economic policy objectives. A characteristic of legal instruments is that individuals or organizations can be compelled by government to comply with prescribed behaviour under penalty of sanctions. With regard to financial regulations, the focus is on maintaining systemic stability and protecting the interest of the customer. Maintaining systemic stability is important because social costs of financial distress are high in the form of the contagion effect. A wholesale customer, such as a corporate or large net worth individual, should be in a position to have the capacity and resources to make informed choices. But a retail customer, such as small saver or small borrower, cannot incur the cost of getting information, acquire or employ skills to analyse, have large enough volumes to learn from experience, big enough portfolio to spread risks and as such will be unequal in relation to the financial intermediary. Above all, economies of scale are likely in monitoring

information on a collective basis. In brief, the why of financial regulation should be considered essentially in the light of the primary objectives, namely, maintaining systemic stability and giving an impression of protecting interests of the retail customer; and implicitly other objectives will have to be secondary. This chapter discusses the various economic regulation theories, the advantages and disadvantages of regulation, the concepts of single and multiple regulators and various acts made in the context of Indian financial system.

5.2 THEORIES OF REGULATION

LO 1
Know several theories of regulation

There are several theories that attempt to explain regulation in general and financial sector regulation in particular. These include theory of competition for regulation, theory of regulatory capture, and public interest theory which always aim to correct the market failures. The rationale for regulation lies in the search for a public policy that makes markets work better, while avoiding the dangers of excessive burden by treating regulation as a free good and the scope for regulatory capture by the few suppliers compared to the large dispersed consumers. More generally, the objectives of regulation are to avoid monopoly power, foster competition and protect the consumer's interest. Broadly, there are two types of economic regulations (i) structural regulation, and (ii) conduct regulation. *Structural regulation* concerns the regulation of the market structure. Examples are restrictions on entry or exit and rules mandating firms not to supply professional services in the absence of a recognized qualification. *Conduct regulation* is used to regulate the behaviour of producers and consumers in the market. Examples are price controls, the requirement to provide in all demand, the labelling of products, rules against advertising and minimum quality standards. *Social regulation* comprises regulation in the area of the environment, occupational health and safety, consumer protection and labour, and so on.[1] Traditional economic theory suggests that there are three main purposes of regulation such as (i) to constrain the use of monopoly power and the prevention of serious distortions to competition and the maintenance of market integrity; (ii) to protect the essential needs of ordinary people in cases where information is hard or costly to obtain, and mistakes could devastate welfare; and (iii) where there are sufficient externalities that the social, and overall, costs of market failure exceed both the private costs of failure and the extra costs of regulation.[2]

Under the perfect market assumptions according to *Public Interest Theories of Regulation*, the regulation of firms or other economic factors contributes to the promotion of the public interest. This public interest can further be described as the best possible allocation of scarce resources for individual and collective goods and services in the society. Under certain circumstances, the allocation of resources is not optimal due to *market failure*.[3] One of the methods of achieving efficiency in the allocation of resources at the time of market failure is government regulation (Arrow, 1970, 1985; Shubik, 1970). The *Chicago Theory of Regulation* proposed by Stigler (1971) proposes that 'as a rule, regulation is acquired by the industry and is designed and operated primarily for its benefit'. The government can grant exemption from antitrust legislation, grant subsidies or ban the entry of competitors directly so that the levels of prices rise. The government can maintain minimum

[1]Johan den Hertog, 2010, *Review of Economic Theories of Regulation*, Discussion Paper Series 10–18, Tjalling C. Koopmans Research Institute, Utrecht School of Economics, The Netherlands.
[2]Markus Brunnermeier, Andrew Crocket, Charles Goodhart, Avinash D. Persaud and Hyun Shin, 2009, *The Fundamental Principles of Financial Regulation*, Geneva Reports on the World Economy 11.
[3]A *market failure* is a situation where scarce resources are *not* put to their highest valued uses.

prices and restrict entry more easily than a cartel. The government can suppress the use of substitutes and support complements. Peltzman (1976) extended the Stigler theory and assumes that politicians will choose their policy of regulation such that political support is maximized. It is not likely that regulation will benefit industry exclusively; some consumer groups will also be able to organize themselves effectively. According to Peltzman, the core problem for regulators is *efficient regulation*: what price level should be settled such that the gain in votes resulting from the wealth transfer just balances the loss of votes resulting from the rise in prices.

Some of the theories have criticized the theories of the advantages of regulations and argued in favour of free market. All these are summarized as follows: (i) free markets outperform regulated markets as competitive markets are Pareto efficient where marginal revenue equals marginal cost, and prevent discriminatory pricing and promote the service quality through economies of scale, (ii) deregulated markets are efficient due to lower transaction and monitoring costs, and (iii) considering the efficient market hypothesis prices are unbiased estimates of true market value and investors cannot earn above-average benefits analysing the financial statements and, therefore, regulation is unnecessary.

5.3 REGULATORY APPROACHES

There are four regulatory approaches such as *Integrated Approach*, *Twin Peaks Model*, *Functional Approach* and *Institutional Approach* used across the globe. All these approaches are explained as follows.

LO 2
Recognise the four regulatory approaches

5.3.1 Integrated Approach

In an integrated approach, a single regulator oversees all types of financial institutions and provides both prudential regulation as well as conduct-of-business or consumer protection regulation. The integrated approach is designed to eliminate regulatory arbitrage, facilitate greater communication and information-sharing among regulators of a given institution, and consolidate rule-making and application. A system with a single regulator would generally be set up with two main divisions, the larger part focused on prudential regulation and the second part on conduct of business regulation and consumer protection.

5.3.2 The Twin Peaks Approach

The twin peaks approach relies on two types of regulators as follows: (i) a prudential regulator, and (ii) a conduct-of-business regulator. Although defined as separate entities, these two regulators generally employ a high level of coordination, as they are each responsible for overseeing the functioning of different aspects of the same institutions.

5.3.3 The Functional Approach

The functional approach seeks to regulate financial institutions based on the type of business they undertake, without considering how a given institution is defined legally. Therefore, various branches of the same institution could be under the purview of different regulators as a result of the business that they conduct. The United States structure is most akin to the functional approach.

5.3.4 The Institutional Approach

Under an institutional approach, the legal status of an institution determines its regulatory supervision. The institutional approach is one of the least flexible, proving difficult to adapt to the blurring lines between types of financial institutions. Despite a given legal status, many financial institutions have engaged in increasingly broad operations outside of the relatively narrowly defined confines of that status.

5.4 SINGLE VERSUS MULTIPLE REGULATORS[4]

LO 3
Compare single versus multiple regulators

The structural issue of financial regulation has recently gained attention for several reasons. Recently, there has been significant attention to structural aspects of regulation. First, the growth of financial sector is characterised by the blurring of distinction between banking, securities and insurance activities. Second, even if these institutions and activities are treated with a compartmental approach and even if risks are considered separable, the linkages are such that the contagion cannot be avoided. Third, globalisation has resulted in multifunctional global conglomerates warranting appropriate changes in structural aspects of domestic regulation.

The arguments in favour of a single regulator can be summarized as follows:

- There are economies of scale for the regulator since unification may permit cost savings on the basis of shared infrastructure, administration, and support systems.
- The regulated units also benefit, since unification mitigates the costs which supervised firms with diverse activities (i.e. financial conglomerates) bear for dealing with multiple regulators.
- Accountability is enhanced since complexity of the multiple supervisory systems could lead to lack of clarity of roles and consequently lack of accountability.
- Regulatory arbitrage can be avoided in the case of a single regulator. In a multiple regulatory regime, fragmentation of supervision could lead to competitive inequalities as different units, possibly offering similar products or services, are supervised differently.
- Reducing the number of regulators could allow scarce supervisory resources especially in specialist areas to be pooled.
- A single regulator can respond more effectively to market innovation and development as there would be no regulatory grey areas.
- Unification aids in international cooperation as there is a single contact point for all the regulatory issues.

The arguments against the idea of a single regulator are as follows:

- Unification could lead to lack of clarity in functioning as multiple regulators tend to have different objectives. This objective may be depositor protection for banks versus investor protection for capital markets versus consumer protection for other financial firms.
- Concentration of power could vitiate democratic policies.

[4]Y.V. Reddy, 2001, *Issues in choosing between single and multiple regulators of financial system*, Address given at the Public Policy Workshop, at ICRIER, New Delhi on 22 May, 2001.

- There may actually be diseconomies of scale since monopolistic organizations can be more rigid and bureaucratic than specialist agencies because they would typically be large and too broad-based structures for effective regulation of the entire system.
- Fourth, there may be unintended consequences of public tending to assume that all the creditors of supervised institutions will receive equal protection.

In developing countries, where banks dominate in banking insurance and securities business, there may be a case for unified regulation. A unified regulator was announced in UK in 1997; changes have been considered in Australia and reform has been brought about in Japan. The United States has followed the multiple regulator approach. In India, there is a separate agency for each main sector. In India, as in the case of many other countries, there are several agencies entrusted with the task of regulation and supervision of different institutions and market participants in the financial sector. While the specific objective may vary from depositor protection and investor protection to market regulation, their common concern is maintaining financial stability.

5.5 ACTS RELATED TO FINANCIAL SECTOR REGULATIONS IN INDIA

LO 4

Discuss in detail various acts related to financial sector regulations in India

Regulations are made under the authority of an Act. Regulations are enacted by the body to whom the authority to make regulations has been delegated in the Enabling Act, such as the regulatory bodies. The major regulators in India are Reserve Bank of India (RBI), Securities and Exchange Board of India (SEBI), Insurance Regulatory Development Authority (IRDA) and Pension Fund Regulatory Development Authority (PFRDA). The functions, role and their growth are discussed in the Chapters 6 and 7. Different Acts passed by the Parliament and other regulatory measures taken by the authorities in recent time in India are briefly described below.

5.5.1 The Banking Regulation Act, 1949[5]

- 'Banking' means accepting, for the purpose of lending or investment, of deposits of money from the public, repayable on demand or otherwise, and withdrawal by cheque, draft, order or otherwise [(Sec. 5(b)]. 'Banking Company' means any company which transacts the business of banking in India [Sec. 5(c)].'Demand liabilities' are the liabilities which must be met on demand, and 'time liabilities' are liabilities other than demand liabilities.
- Apart from the banking business, a banking company may be engaged in the borrowing or raising of money; lending money with or without security; dealing in bills of exchange, *hundies*, promissory notes and so on; granting and issuing of letters of credit, traveller's cheques and so on; buying, selling and dealing in bullion, foreign exchange and so on; and providing safe deposit vaults and so on.
- It can also act as the agent of any government or local authority.
- It can also act as underwriter and can also participate in managing and carrying out any issue, public or private.

[5]http://resource.cdn.icai.org/35285bos24910cp23.pdf; https://rbidocs.rbi.org.in/rdocs/Publications/PDFs/BANKI15122014.pdf

- It can also undertake the guarantee and indemnity business and manage, sell and realize any property which may come into the possession of the company in satisfaction of any claim. It can also undertake and execute trusts and takeover the administration of estates as executor, trustee and so on.
- Any banking company will not deal in the buying or selling of goods, except the realization of security in connection with bills of exchange received for collection or negotiation.
- No banking company will be managed by a managing agent and continue the employment of any person who has been adjudicated insolvent or has suspended payment or has compounded with his creditors or has been convicted by a criminal for an offence involving moral turpitude and so on.
- The directors of the banking company should have knowledge and experience in accountancy, agriculture and rural economy, banking, co-operation, economics, finance, law, small-scale industry and so on. At least two directors should have special knowledge or practical experience in respect of agriculture and rural economy, co-operation or small-scale industry. Any director of a banking company except the Chairman or whole-time Director will not hold office continuously for a period of more than 8 years after removal under this act and will not be eligible to be reappointed as the Director for a period of 4 years from the date of his ceasing to be the Chairman or whole-time Director. The Chairman appointed on the whole-time basis and the Managing Director in the whole-time employment will not hold office for more than 5 years and will be eligible for reappointment. The whole-time Chairman and the Managing Director should have knowledge and experience of the working of a banking company, or of the State Bank of India or any subsidiary bank or a financial institution and finance, economic or business administration. The Chairman of the Board of Directors appointed on a whole-time basis or the Managing Director whose term of office has come to an end, will with the prior approval of the Reserve Bank, continue in office until his successor assumes office. If the office, of the Chairman or Managing Director of a banking company is lying vacant and the Reserve Bank of India thinks that such vacancy will affect the interests of the banking company adversely, will appoint an eligible person as the Chairman or Managing Director and shall not hold office for a period exceeding 3 years, as the Reserve Bank may specify and will be eligible for reappointment. Chairman or the Managing Director and a Director appointed by the Reserve Bank shall not be required to hold qualification shares.
- Any banking company will not carry on business in India, unless the subscribed capital of the company is not less than one-half of the authorized capital, and the paid-up capital is not less than one-half of the subscribed capital.
- The Chairman, Managing Director or Chief Executive Officer shall furnish to the Reserve Bank, full particulars of the extent and value of his holding of shares and any change in such holding or any variation in the rights.
- No person shall, except with the previous approval of the Reserve Bank, acquire shares of a banking company or voting rights therein, a holding of 5 percent or more of the paid-up share capital of such banking company or be entitled to exercise 5 percent or more of the voting rights in such banking company.
- The banking company shall not pay commission, brokerage, discount or remuneration in any form in respect of any shares issued by it, not exceeding in the aggregate two and one-half percent of the price at which the said shares are issued.
- No banking company incorporated in India shall have as a director in its Board of Directors any person who is a director of any other banking company (Sec. 16).

- No banking company shall have in its Board of Directors, more than three directors who are directors of companies which among themselves are entitled to exercise voting rights in excess of 20 percent of the total voting rights of all the shareholders of that banking company.
- Any company shall not carry on banking business in India unless a license is issued by the Reserve Bank. The Reserve Bank may cancel a license if the company ceases to carry on banking business in India or if it fails to comply with the conditions imposed upon it, but it may appeal within 30 days from the date on which such decision is communicated to it, to the central government.
- The banking company will not open a new place of business in India or change otherwise than within the same city, town or village or outside India, without the prior approval of the Reserve Bank of India.
- The assets of the banking company at the close of business on the last Friday of every quarter should not be less than 75 percent of its demand and time liabilities in India.
- The balance-sheet and profit and loss account shall be audited by the auditor of company.
- The Reserve Bank will provide an annual report to the central government on the trend and progress of banking in the country, and its suggestions, for strengthening the banking business in the country. Whenever the Reserve Bank thinks that it is in the public interest or the affairs of a banking company are detrimental to the interests of the depositors or for securing the proper management, the Reserve Bank may remove any chairman, director, chief executive officer or other officer or employee of the banking company. Such removed person within 30 days from the date of communication of order to him may appeal to the central government. The decision of the central government on such appeal shall be final and shall not be called into question in any court.
- If the Reserve Bank is satisfied that in the public interest or the affairs of any banking company being conducted in a manner detrimental to the interest of the depositors then in consultation with the central government may supersede the Board of Directors for a period not exceeding 6 months which may be extended up to the total period of 12 months. In such situation, the Reserve Bank may appoint an administrator who has experience in law, finance, banking, economics or accountancy, in consultation with the central government for such period as it may determine.
- The Reserve Bank may make the application for the winding up of a banking company, if the banking company has failed to comply with the specified requirements or has become disentitled to carry on banking business in India or has been prohibited from receiving fresh deposits and so on, or the continuance of the banking company is prejudicial to the interests of its depositors. A Court liquidator attached to every High Court is to be appointed by the central government for the purpose of conducting all proceedings for the winding up of banking companies. Where a winding up order has been made in respect of a banking company, the official liquidator shall submit a preliminary report to the High Court within 2 months from the date of the winding up order giving the information required and also stating the amount of assets of the banking company in cash which are in his custody.
- Any banking company cannot be voluntarily wound up unless the Reserve Bank certifies that the company is able to pay all its debts to its creditors.
- Any banking company will not be amalgamated with another banking company, unless a scheme containing the terms of such amalgamation has been placed in writing before the shareholders of each company concerned separately, and approved by a resolution passed by a majority representing two-thirds in value of the shareholders of each of the said companies, present either in person or by proxy in the meeting so-called. If it is approved by the requisite majority, it will be submitted to the Reserve

Bank for sanction and if sanctioned, will be binding on the banking companies concerned and also on all the shareholders.

- If a deposit is held by a banking company to the credit of any person, the depositor may nominate any person to whom in the event of his death, the amount of deposit may be returned by the banking company. Where an individual has hired a locker, such individual may nominate any person to whom, in the event of the death of such individual, the banking company may give access to the locker and take possession of the contents of the locker.
- The central government will not approve the change of name of any banking company unless the Reserve Bank gives no objection certificate. The application for the confirmation of the alteration of the memorandum of a banking company will not be maintainable unless the Reserve Bank certifies that it has no objection to such alteration.

5.5.2 The Securities Contracts (Regulation) Act, 1956[6]

- The Securities Contracts (Regulation) Act was enacted by Parliament, *vide* Act No. 42 of 1956 and applies to whole of India and it has 32 sections.
- It was enacted with the purpose of preventing undesirable transactions in securities and for promoting healthy stock market. This act permitted the stock exchanges to operate in different types of structures. Therefore, it can be seen that some stock exchanges were association of persons, some were in the form of companies limited by guarantee as well as some were in the form of companies limited by shares.
- The central government amended The Securities Contract (Regulation) Act, 1956 through the Securities Laws (Amendment) Act, 2014 with the intention of providing for the corporatisation [7] and demutualisation[8] of all the recognized stock exchanges, delisting of securities, penalties, and so on, and other related matters. The very purpose of the act is to convert stock exchanges which were earlier set up as association of persons or as companies limited by guarantee, into companies limited by shares.
- The power of recognizing the stock exchanges vests with the central government. But these powers have been delegated by the central government to SEBI *vide* its notification No. F.No.1/57/SE/93 dated 13.9.94.
- For seeking recognition, a stock exchange has to make an application to the central government along with the bye-laws, rules and regulations having specific details about the governing body of the stock exchange as well as its constitution and powers of management, powers and duties of office bearer, admission along with the qualification, exclusion, suspension, expulsion and readmission of members, procedure for registration of partnership as members to stock exchange and so on. The central government under Sec. 4, after making inquiry and obtaining such further information as it may require if any, may grant recognition to stock exchange subject to the conditions it may impose.
- If the central government thinks that the withdrawal of the recognition granted to an exchange is in the interest of the trade and in the public interest, then it may after giving proper notice to the governing body

[6]http://www.sebi.gov.in/acts/contractact.pdf; http://resource.cdn.icai.org/41058bos30846cp20.pdf

[7]Sec. 2(aa) defines corporatisation as the succession of a recognized stock exchange, being a body of individuals or a society registered under the Societies Registration Act, 1860, by another stock exchange, being a company incorporated for the purpose of assisting, regulating or controlling the business of buying, selling or dealing in securities carried on by such individuals or society.

[8]Under Sec. 2(a)(b), demutualisation is the segregation of ownership and management from the trading rights of the members of a recognized stock exchange in accordance with a scheme approved by the Securities and Exchange Board of India.

of the exchange, withdraw the recognition. The recognition so withdrawn will not affect the validity of contracts entered into before the date of withdrawal of notification (Sec. 5).

- Every stock exchange has to maintain the books of accounts for a period of 5 years which can be inspected by SEBI at any point of time. Periodical returns have to be furnished to SEBI in the prescribed format.
- Sec. 7 requires every stock exchange to furnish a copy of annual report to the central government. At present, all the stock exchanges have the provision for one member one vote and only the member of the stock exchange can be appointed as a proxy.
- A recognised stock exchange can transfer the duties and functions of a clearing house to a clearing corporation (A company registered under the Companies Act) for the periodical settlement of contracts and difference and the delivery of and payment for securities.
- Recognised stock exchanges have been empowered to make bye laws for regulation and control of contracts with the prior approval of the SEBI. Such bye laws may have the provision for the opening and closing of markets and the regulation of the hours of trade, regulation or prohibition of blank transfers, the regulation or prohibition of *badlas* or carry-over facilities, the fixing, altering or postponing of days for settlements, the determination and declaration of market rates, including the opening, closing, highest and lowest rates for securities, prescription of margin requirements, listing, suspension or prohibition of trading in any specified securities, the procedure for settlement of claims or disputes, levy and recovery of fees, fines and penalties, the fixing of a scale of brokerage and other charges and so on (Sec. 9).
- If any member is found to be indulged in the contravention of the bye laws, he will be liable for punishment like fine, expulsion from membership, suspension from membership for a specified period or any other similar penalty not involving the payment of money.
- The central government has the power under Sec. 12 to suspend the business of recognised stock exchange for a period not exceeding 7 days if it thinks that an emergency has arisen and for meeting the emergency it is necessary to do so. The central government also has the power to extend this period by a similar notification.
- According to Sec. 13(A), a stock exchange may establish additional trading floor with the prior approval of the SEBI, in accordance with the stipulated terms and conditions to enable the investors to buy and sell securities through such trading floor under the regulatory framework of that stock exchange.
- The issuer, who has the intention to offer the certificates and instruments to the public, shall make an application to one or more recognised stock exchanges for seeking permission for such certificates or instruments to be listed on the stock exchange, before issuing the offer document to the public. If the permission has not been granted then the issuer shall pay the money back to the applicants received in pursuance of the offer document.
- Nobody is permitted to organise or assist in organising or be a member of unrecognised stock exchange without the permission of the central government (Sec. 19).
- Listing of securities with recognised stock exchange is mandatory, if the shares are issued to the public through public issue. The person applying for the listing of the securities has to comply with the conditions of listing agreement in that stock exchange (Sec. 21). The shares may be delisted by a recognised stock exchange after recording proper reasons on any of the grounds prescribed under this act. The securities shall be delisted after giving a reasonable opportunity of being heard.

5.5.3 Securities and Exchange Board Act, 1992[9]

- The capital market can sustain the investor's confidence by ensuring the investor's protection. Keeping this in view, the central government decided to vest SEBI with statutory powers to deal with matters related to the capital market effectively. The objective of setting the Securities and Exchange Board of India is to promote fair dealing in securities and ensuring a market platform where the funds can be raised relatively at a lower cost, providing protection to the investors, and safeguarding their interest so that there is a proper flow of savings into the market, developing a code of ethics for the market participants for making them competitive and so on.
- The SEBI Act came into force on 30 January, 1992 and extends to the whole of India. SEBI is a body having perpetual succession and a common seal and can acquire, hold and dispose of property and can sue and be sued in its own name.
- The Chairman and the members must have the knowledge and experience of law, finance, economics, accountancy, administration and so on. The Chairman and the whole-time members can hold office upto 3 years subject to a maximum age limit of 65 and are eligible for reappointment. The maximum tenure of the part-time member is 3 years but there is no maximum age limit. The central government has the power to remove the Chairman or any other member of the board if he is adjudged as an insolvent person, declared to be of unsound mind by the court, convicted of an offence involving moral turpitude or if he has abused his position so as to render his continuance detrimental to the public interest, after giving him a reasonable opportunity of being heard (Sec. 7).
- Any member, who is the director of a company and has any pecuniary interest in the concerned company's matter coming to the board meeting, should disclose his interest and should not participate in the proceedings of the board meeting related to the concerned matter.
- The SEBI performs a lot of functions like, regulating the business in stock exchanges, registering and regulating the working of the intermediaries, promoting and regulating self-regulatory organizations, prohibiting fraudulent and unfair trade practices in the stock market, promoting investors' education and training of intermediaries, prohibiting the insider trading, regulation of substantial acquisition of shares and takeover of companies, conducting enquiries and audits of stock exchanges and so on.
- If the board has reasonable ground to believe that the manner in which the securities are being dealt with are detrimental to the investors or securities market, or any intermediary or person associated with the market has violated any of the provisions of the act, may order to investigate the affairs of such intermediary or person associated with market.
- Nobody can sponsor any venture capital fund and collective investment schemes including mutual funds until he obtains a certificate of registration from the board in accordance with the regulations. All sums realized by way of penalties will be credited to the consolidated fund of India.

5.5.4 The Depositories Act, 1996[10]

- The act extends to the whole of India and came into force on 20 September, 1995.

[9]http://resource.cdn.icai.org/41057bos30846cp19.pdf; http://www.sebi.gov.in/cms/sebi_data/attachdocs/1456380272563.pdf
[10]http://www.sebi.gov.in/acts/act03a.pdf; http://www.rna-cs.com/an-insight-into-the-depositories-act-1996

- A depository is a company formed and registered under the Companies Act and has been granted a certificate under the Sub-Section (1A) of Section 12 of the Securities and Exchange Board of India Act, 1992.
- Any depository can only work after obtaining the certificate of commencement of business from the board and the certificate is granted by the board after being satisfied that the depository has adequate systems and safeguards to prevent manipulation of records and transactions. The board cannot refuse to grant the certificate without giving an opportunity of being heard.
- A depository will enter into an agreement with participants as its agents and any person can enter into an agreement with any depository for availing its services through the participants. The depository will register the transfer of the security in the name of the transferee on getting the intimation from the participants.
- The person subscribing to the securities has the option of either receiving the security certificates or hold securities with the depository. If person opts to hold the security with the depository, the issuer intimates the details of the allotment to the depository and then the depository enters the name of the allottee in its records as the beneficial owner of that security.
- All the securities with the depository must be in the dematerialized form.
- The depository is the registered owner for the purpose of effecting transfer of security on behalf of the beneficial owner.
- The depository does not have the voting rights on the securities held by him, on behalf of the beneficial owner. The beneficial owner is entitled to all the rights and benefits and is subject to all the liabilities in respect of his securities held by the depository on his behalf. A register and an index of beneficial owners are to be maintained by every depository. The beneficial owner can create a pledge or hypothecation in respect of the security held through depository, with its prior approval and the intimation regarding this has to be given to the depository by the beneficial owner and the same will be entered in the records by the depository. Such entry in the record will be the evidence of the pledge or hypothecation. The depository will have to inform the issuer about the transfer of the securities at such intervals as specified.
- If the beneficial owner seeks to opt out of a depository, it should inform to depository who will make appropriate entries and inform the issuer. The issuer within 30 days will issue the certificate of securities to the beneficial owner or the transferee on complying with the necessary conditions.
- In the event of loss caused to the beneficial owner due to the negligence of the depository, the depository will have to indemnify the beneficial owner. If the loss due to the negligence of the participant is indemnified by the depository, it has the right to recover from the participant.
- The SEBI, if necessary in the public interest can call for the information from, or authorize any person to make an enquiry into the affairs of the participants, issuer and depository of the beneficial owner as required. If after making the enquiry, the board is satisfied that it is in the interest of the investors or the development of the market and to prevent the conduct of any depository which is detrimental to the interest of the investors and the securities market, the board may provide necessary directions to any depository, participants or any issuer which are appropriate in the interest of the investors or the market.
- If any intermediary who is registered with SEBI, after being called to redress the grievances of the investors fails to do so within the specified time, shall be liable to a penalty of one lakh rupees for each day during which such failure continues or 1 crore rupees whichever is less. For adjudging under Sections 19A, 19B, 19C, 19D, 19E, 19F and 19G, any officer not below the rank of a Division Chief

of the Securities and Exchange Board of India to be appointed as an adjudicating officer for holding an inquiry. The adjudicating officer has the power to summon and enforce the attendance of any person to produce any document. If, he is satisfied that the concerned person has failed to comply with the provisions, he may impose the penalty as he thinks fit. While adjudging the quantum of penalty, due regard will be given to the amount of unfair advantage made as a result of the default, the amount of loss caused to an investor as a result of the default and the repetitive nature of the default. On the failure to pay the penalty, the Recovery Officer may attach and sale the person's movable property, attach the person's bank accounts, attach and sale the person's immovable property, arrest the person and detain in prison or appoint a receiver for the management of the person's movable and immovable properties. All sums realized by way of penalties will be credited to the Consolidated Fund of India.

- The central government may on board's recommendation, if satisfied that the person who is alleged to have violated any of the provisions has made a full and true disclosure, grant to such person immunity from prosecution for any offence under this Act as well as from any penalty. But no such immunity shall be granted in cases where the proceedings for the prosecution have been instituted before the date of receipt of application for grant of such immunity. The recommendation of the Board is not binding upon the central government. Immunity thus, granted may be withdrawn if such person had, in the course of the proceedings, not complied with the condition on which the immunity was granted or had given false evidence.

5.5.5 The Foreign Exchange Management Act, 1999[11]

- The Foreign Exchange Management Act was enacted for facilitating global trade and for regulating the inflow and outflow of the foreign exchange. It helped in the management of the foreign exchange reserves of the country. It helped in promoting the development and maintenance of the foreign exchange market in India.
- This act extends to the whole of India and also applies to all branch offices operating outside India but controlled by a resident Indian. This act is not applicable to Indian citizens who are outside India unless they are Indian residents.
- Previously there were authorized dealers and money changers who were licensed to deal in foreign exchange, but under this act both have been clubbed together and are known as authorized persons, which also includes off-shore banking unit.
- The transaction altering the assets and liabilities, including contingent liabilities outside India, of persons resident in India or assets or liabilities in India of persons resident outside India would be a capital account transaction. Indian rupee is yet not fully convertible; therefore, the capital account transactions are permitted to an extent.
- The transactions other than the capital account transactions are known as the current account transactions.
- The person resident in India is the person who has resided in India, in the preceding financial year for more than 182 days. Citizenship is immaterial in determining the residential status of the person.
- Section 3 of the FEMA prohibits the dealing in foreign exchange by an unauthorized person, receiving any payment otherwise than through an authorized person on behalf of any person resident outside India or entering into any transaction in India for acquisition and transfer of an asset outside India.

[11]http://dor.gov.in/Foreign_Exchange_acts; http://resource.cdn.icai.org/35283bos24910cp21.pdf

- Any person in India is not allowed to acquire, hold, own, possess or transfer any foreign exchange, foreign security or any immovable property situated outside India. But the acquisition of the immovable property on lease, outside India for a period not exceeding 5 years is allowed provided such transactions should not be specifically prohibited. The prior approval of Reserve Bank of India is required for acquisition and transfer of the immovable property outside India by a person resident in India.
- An individual person can avail the facility of foreign exchange up to the limit of USD 2,50,000 for the private visits to any country (except Nepal and Bhutan), gift or donation, going abroad for employment, emigration, maintenance of close relatives abroad, travel for business, attending a conference or specialized training, expenses in connection with medical treatment abroad and any other current account transaction. Prior approval of RBI is required for any additional remittances in excess of the said limit for the aforementioned purposes.
- Some capital account transactions made by persons resident in India are permissible, such as investment made in foreign securities, foreign currency loans raised in India, transfer of immovable property outside India, guarantees issued by a resident Indian in favour of person resident outside India, export, import and holding of currency notes, loans and overdrafts by a resident Indian from a person resident outside India, maintenance of foreign currency accounts in India and outside India by a person resident in India, taking out of insurance policy by a resident Indian from an insurance company outside India, loans and overdrafts by a resident Indian to a person resident outside India, remittance outside India, of capital assets of a person resident in India and so on.
- There are some capital account transactions made by persons resident outside India and are permissible, such as investment in securities in India, acquisition and transfer of immovable property in India, guarantee in favour of person resident in India, deposits between a person resident in India and a person resident outside India, foreign currency account in India of the person resident outside India, remittance outside India of capital assets in India of a person resident outside India, and so on.
- There are some transactions on which no restriction has been imposed like amortization of loan and the depreciation of direct investments in ordinary course of business.
- A person resident outside India, but is a citizen of India, can acquire an immovable property in India except an agricultural property, plantation or a farm house and can transfer any immovable property in India to a person resident in India. Prior permission of the Reserve Bank of India is required for repatriating outside India the sale proceeds of any immovable property.
- A resident Indian is not allowed to acquire or transfer any immovable property situated outside India without the prior approval of the Reserve Bank of India but it does not apply to the property held by a person resident in India who is a foreign national and has acquired the property on or before 8 July 1947 and continues to hold with the permission of the Reserve bank of India.
- A person resident in India may acquire an immovable property outside India by way of gift or inheritance or by way of purchasing out of foreign exchange held in Resident Foreign Currency account (RFC). The immovable property acquired outside India by a person resident in India can be transferred by way of gift to his relative who is person resident in India.
- An Indian company having overseas offices for business and residential purpose of the staff may acquire immovable property outside India according to the guidelines issued by the Reserve Bank of India.
- The citizens of Pakistan, Bangladesh, Sri Lanka, Afghanistan, China, Iran, Nepal, Bhutan, Macau or Hong Kong are not allowed to acquire or transfer immovable property in India, other than lease, not exceeding 5 years.

- Every exporter of the goods will have to furnish to the Reserve Bank of India or to such other authority, declaration containing true and correct material particulars as well as the full export value and if not ascertainable, the value on the basis of the prevailing market condition, expected to receive on the sale of the goods in a market outside India.
- The furnishing of the declaration with respect to the export of goods or services are not required in some cases, such as free supply of trade samples and publicity material, goods imported free of cost on re-export basis, gift of goods of not more than 50 lakhs rupees, goods or software not exceeding 25,000 rupees, replacement goods exported free of charge in accordance with the provisions of Exim policy in force for the time being, goods sent outside for testing subject to re-import into India, defective goods sent outside India for repair and re-import accompanied by a certificate from the authorized dealer in India stating that the export does not involve any foreign exchange transaction, export permitted by the Reserve Bank of India and so on.
- The full export value of the goods or software exported shall be realized and repatriated to India within 12 months from the date of export but this will not apply to the goods and software exported by the units in Special Economic Zones.
- No one is allowed to take or send out by sea, land or air any goods from India to any place outside India on lease or hire or in any other manner except for sale or disposal of such goods without the prior approval of the Reserve Bank of India.
- Counter trade involves an arrangement involving adjustment of value of goods imported into India against value of goods exported from India and requires prior approval of Reserve Bank of India. If an exporter receives advance payment from a foreign buyer, the exporter should ensure the shipment of the goods within 1 year from the date of receipt of advance payment, the rate of interest payable on the advance payment should not exceed LIBOR +100 basis points and the documents of shipment should be routed through the authorized dealer through whom the advance payment has been received. If the export agreement indicates the shipment of the goods beyond the period of 1 year from the date of receipt of advance payment, prior approval of Reserve Bank of India is required.
- The person to whom any amount of foreign exchange is due or has accrued, shall take all the reasonable steps to realize and repatriate to India within the period and manner as specified by the Reserve Bank of India. After realization, the person should repatriate to India and sell it to an authorized person in India in exchange for rupees or retain or hold it in account with authorized dealer or use it for the discharge of a debt and liability denominated in foreign exchange as specified by the Reserve Bank of India.
- The Reserve Bank of India has specified some persons resident in India who can possess or retain the foreign currency with some limits. Authorized person can retain the foreign exchange up to the amount as specified by the RBI, whereas there is no restriction on the possession of the foreign coins by any person. Any resident Indian is allowed to retain in aggregate the foreign currency not exceeding USD 2000. A person who is not permanently resident of India is permitted without limit to retain the foreign currency, if he has acquired it during his residence outside India and has brought to India after declaration to the customs authorities.

5.5.6 The Competition Act, 2002[12]

- Initially, Monopolistic and Restrictive Trade Practices Act was enacted to deal with the market and competition, which was concerned with monopolistic, restrictive and unfair trade practices. Due to the new changes and challenges in the world economy, a legislative framework relating to the competition law including mergers and demergers was needed. As a result of which, The Competition Act, 2002 was enacted, which received assent from the president on 13 January, 2003. The act extends to the whole of India except the state of Jammu and Kashmir.
- With the object of economic development of the country, the act provided for the establishment of a commission for preventing practices having adverse effect on competition, for promoting and sustaining competition[13] in the markets, for protecting the interests of consumers and to ensure the freedom of trade. The Competition Commission has been conferred necessary powers by the Competition Law for enforcing and implementing the competition policy whose central economic goal is the protection and promotion of the competitive process. The effective competition ensures equal opportunities to the competitors to compete for their own interest. The aforementioned act was amended in 2007 and in 2009.
- The Act provides for the establishment of the Competition Commission[14] of India and the establishment of the Competition Appellate Tribunal.[15]
- Competition Commission of India is a body having perpetual succession and a common seal and has the power to acquire, hold and dispose of property and to contract and can sue and be sued. The central government will decide where the head office of the commission will be situated. The commission may also establish offices at other places in India also. The commission consists of the Chairman and at least two members and not more than six members who are appointed by the central government. The Chairman and the members of the commission are the whole-time members. The chairperson or the other member shall be a person of ability and integrity and having special knowledge of economics, business, commerce, law, finance, and so on. The term of the chairperson and other members will be of 5 years and shall be eligible for reappointment up to the maximum age of 65 years. If the office of the chairperson is vacant due to death, resignation or otherwise, the senior most member will act as the chairperson till the new chairperson is appointed. In case the chairperson is not able to discharge his functions owing to absence, illness or any other cause, the senior most member will discharge his functions until the chairperson resumes his office to discharge his function properly. The chairperson and the other members may resign from their office after giving a notice to the central government in writing. The chairperson or other members can be removed from their office if they are adjudged as insolvents, are engaged in any paid employment during the term of their office, convicted of an offence involving moral turpitude, have acquired such interest which is likely to affect their functions prejudicially, have abused their position and are physically or mentally incapable of acting as a member. The Chairman and others will not accept any employment in any enterprise which has been a party to a proceeding before

[12]http://resource.cdn.icai.org/35284bos24910cp22.pdf;
http://lawmin.nic.in/ld/P-ACT/2003/The%20Competition%20Act,%202002.pdf

[13]Competition is the situation in which firms or sellers independently strike for the buyer's patronage in order to achieve a particular business objective, for example, profit, sales or market share (World Bank, 1999).

[14] The Competition Commission of India is an expert body functioning as a market regulator to prevent and regulate anti-competitive practices in the country.

[15] The Competition Appellate Tribunal is a three member quasi-judicial body headed by a Supreme Court judge or the chief justice of the High Court for hearing and disposing of the appeals against any order passed by the Competition Commission.

the commission, for a period of 2 years from the end of their tenure. The Chairman will have the powers of general superintendence, direction and control of all the administrative matter of the commission and may delegate it to any member or officer of the commission, if he thinks fit.

- The competition law focuses on the prohibition of agreements which are considered to be anti-competitive in nature, prohibition of abuse of dominant position and regulation of combinations.
- An agreement prohibiting an enterprise or person or association of persons for entering into an agreement for production, supply, distribution, storage or acquisition of goods and services which causes an adverse effect on competition is void.
- Agreements are of two types, horizontal and vertical. Horizontal agreements are agreements among competitors who are engaged in the same activity and agreements among the non-competitive undertakings operating at different levels of manufacturing and distribution process are known as vertical agreements. Horizontal agreements and cartels[16] can have an appreciable adverse effect on competition. Vertical agreements include tie-in agreements[17], exclusive supply agreements, exclusive distribution agreements, refusal to deal and resale price maintenance.
- It is unlawful for any enterprise to enter into an agreement in respect of supply, production, distribution and so on which causes or can cause an adverse effect on competition in India and hence void. But the Joint venture agreements, which increase efficiency in production, distribution and so on does not come within the purview of anti-competitive agreements.
- The agreements between the enterprises which are engaged in the similar production or trading of goods or services which have the effect of eliminating or reducing competition of bids and adversely affect and manipulate the process of bidding are known as Bid-rigging. Exclusive supply agreement restricts the purchaser from acquiring the goods other than those of the seller or any other person. Exclusive distribution agreement limits the output or supply of the goods or allocates any market for the disposal or sale of goods. Refusal to deal restricts the person or classes of persons to whom goods are sold or from whom the goods are brought. The resale price maintenance is the sale of goods on the condition that the prices charged on the resale by the purchaser shall be the prices stipulated by the seller unless prices lower than those may be charged is clearly stated.
- According to Sec. 4, there is abuse of dominant position by enterprises if it imposes unfair and discriminatory condition or price in purchase or sale of goods and services, restricts production and technical or scientific development relating to goods and services to the prejudice of consumers, indulged in the practice of denial of market access and so on.
- The Commission on getting information about the acquisition, acquiring of control or merger or amalgamation, can inquire into whether such a combination is causing an appreciable adverse effect on competition. But such enquiry cannot be initiated after the expiry of 1 year from the date of such combination.
- For determining whether any combination will affect the competition adversely, the Commission will give due regard to the factor, such as actual and potential level of competition through imports, extent of barriers to entry, level of combination, available substitutes, market share, possibility of a failing business, advantages due to the combination to the economic development and so on.

[16]According to Sec. 2(c), cartel is an association of producers, sellers, distributors, traders or services providers who by agreement among themselves limit or control the production, distribution, sale or price of goods and services.

[17]Tie-in arrangement requires the purchaser of goods to purchase some other goods as a condition of such purchase.

- The Commission can direct the division of an enterprise who is enjoying the dominant position for ensuring that such enterprise does not abuse its dominant position.
- The Commission has the power to enquire into the acts taking place outside India but having an effect on competition in India and pass such orders as it may deem fit in accordance with the provisions of this Act (Sec. 32).
- All the cases pertaining to monopolistic trade practices or restrictive trade practices pending before the MRTP Commission on the commencement of the Competition (Amendment) Act, 2009 will be adjudicated by the appellate tribunal. All the cases of unfair trade practices pending before the MRTP commission, on the commencement of the Competition (Amendment) Act, 2009 will be transferred to the National Commission constituted under the Consumer Protection Act, 1986.

5.5.7 The Securitization and Reconstruction of Financial Assets and Enforcement of Security Interest (SARFAESI) Act, 2002[18]

- The Securitization and Reconstruction of Financial Assets and Enforcement of Security Interest Act, 2002 was enacted to regulate securitization and reconstruction of financial assets and enforcement of security interest. It came into force on the 21st day of June, 2002.
- Every company under this act will have to apply for the registration and get a certificate of registration before commencing or carrying on the business of securitization or asset reconstruction.
- The Reserve Bank of India, before considering the application will satisfy itself that the securitization company or reconstruction company has not incurred losses in any of the three preceding financial years, the directors have adequate professional experience in matters of finance, securitization and reconstruction, the board of directors does not consist of more than half of its total number of directors who are either nominees or associated with the sponsor or any of its subsidiaries, any director who has not been convicted of any offence involving moral turpitude and the company has complied with the necessary conditions of Reserve Bank.
- The Reserve Bank may cancel the certificate of registration if the company ceases to carry on the business of securitization or asset reconstruction, has failed to comply with the conditions on which the certificate of registration has been granted, fails to comply with the directions of the RBI, fails to maintain the accounts according to the RBI guidelines and so on.
- The securitization company acts as an agent for any bank or financial institution for recovering dues from the borrower or as a manager or act as receiver if appointed by any court or tribunal.
- The Reserve Bank may direct the securitization company or reconstruction company to furnish statements and information relating to the business or affairs of such securitization company or reconstruction company.
- Any managing director or manager in charge of management of the business affairs of the borrower will not be entitled to any compensation for the loss of office or premature termination of any contract. It is an effective tool for the NPA recovery of the banks. In most of the cases the NPAs are backed by the securities by hypothecation or mortgage and so on. Upon loan default, banks can seize the securities, except agricultural land without the court intervention.

[18]http://resource.cdn.icai.org/35285bos24910cp23.pdf ; http://www.drat.tn.nic.in/Docu/Securitisation-Act.pdf

- SARFAESI is effective only for secured loans. Banks give notice to the defaulting borrower, to repay the loan within 60 days. On the borrower's failure to comply, bank can take possession of the security, sale and so on. This act also provides for the establishment of the asset reconstruction companies (ARCs) for sale of financial assets by banks and financial institutions to ARCs.
- Under this act, the secured creditors were empowered to recover their dues without the intervention of the court for the first time. The prerequisites for enforcing the rights of the creditors under this act are that the debt must be secured, has been classified by the banks as NPA, the outstanding dues must be one lakh and above, and the security should not be an agricultural land.
- The securitization[19] companies are authorized to raise funds by issuing security receipts to qualified institutional buyers (QIBs), empowering banks and financial institutions to take possession of securities given for financial assistance and sell or lease the same in the event of default.
- Asset reconstruction can be done either by proper management of the business of the borrower, or by taking over it or by selling a part or whole of the business or by rescheduling of payment of debts payable by the borrower and so on. Any person may go to the appellate tribunal against the order of debts recovery tribunal within 30 days from the date of receipt of the order.
- The enforcement of Security Interest and Recovery of Debts Laws (Amendment) Bill, 2011 amends two acts, that is, SARFAESI Act, 2002 and Recovery of Debts due to Banks and Financial Institutions Act, 1993. Under the proposed amendments, banks and asset reconstruction companies are allowed to convert any part of the debt of the defaulting company into equity.

5.5.8 Prevention of Money Laundering Act, 2002[20]

- India has signed UN conventions dealing with the money laundering, *viz*., International Convention for Suppression of Financing of Terrorism (1999), UN Convention against Transnational Organized Crime (2000) and UN Convention against Corruption (2003). Pursuant to the political declaration adopted by the special session of the United Nations General Assembly (UNGASS) held between 8 and 10 June 1998 asking member States to adopt Anti Money Laundering Legislation & Programme, the Parliament enacted the Prevention of Money Laundering Act, 2002 (PMLA 2002).
- PMLA 2002 came into force on 1 July, 2005 and was amended by the Prevention of Money Laundering (Amendment) Act, 2009 with effect from 1 June, 2009 and was further amended by the Prevention of Money Laundering (Amendment) Act, 2012 with effect from 15 February, 2013. Its main objective is to prevent money-laundering and the confiscation of property so derived from money-laundering and to punish the liable persons.
- The Directorate of Enforcement in the Department of Revenue, Ministry of Finance, investigates the cases of offence of money laundering.[21]
- The process of Money laundering involves three stages, *viz*., Placement, Layering and Integration. Placement is holding the money from criminal activities and introducing it into the financial system

[19]The issuing of marketable securities backed by a pool of existing assets into marketable securities is known as securitization.

[20]http://resource.cdn.icai.org/35286bos24910cp24.pdf; http://finmin.nic.in/law/moneylaunderingact.pdf

[21]Money laundering is the process of conversion of proceeds of crime into legitimate money. In the PMLA 2002, Money laundering has been defined as 'any process or activity connected with proceeds of crime including its concealment, possession, acquisition or use and projecting or claiming it as untainted property'.

by the money launderer which can be done by breaking up the large amount of cash into smaller sums which are deposited directly into a bank account. In Layering, the money launderer is engaged in the movement of funds within the financial system through numerous accounts for hiding their true origin and separating them from their criminal source and sometimes in the bank accounts across the globe in those countries which do not cooperate in anti-money laundering. In Integration, the money is reached in the legitimate economy and is inseparable with the legitimate money earned through legal source of income. Then the money is invested in real estate, business ventures and so on.

- Whosoever directly or indirectly attempts to indulge or knowingly assists or knowingly is a party or is actually involved in any process or activity connected with the proceeds of crime including its concealment, possession, acquisition or use and projecting or claiming it as untainted property shall be guilty of offence of money laundering (Section 3). 'Proceeds of crime' means any property derived or obtained, directly or indirectly, by any person as a result of criminal activity relating to a scheduled offence or the value of any such property [Section 2(1)(u)].
- Every scheduled offence is a predicated offence and is a pre-requisite for initiating investing of money laundering. Predicate offences are investigated by police, customs, SEBI, NCB, CBI, and so on under their respective acts.
- The major acts that has been covered in the schedule of the PMLA 2002 are Indian Penal Code, 1860; NDPS Act, 1965; Unlawful Activities (Prevention) Act, 1967; Prevention of Corruption Act, 1988; Customs Act, 1962; SEBI Act, 1992; Copyright Act, 1957; Trademarks Act, 1999; IT Act, 2000; Explosive Substances Act, 1972; Passport Act, 1967; Environment Protection Act, 1986 and Arms Act, 1959.
- According to Sections 48 and 49, the officers of Directorate of Enforcement have been conferred powers to investigate the money laundering cases as well as authorized to initiate proceedings for attachment of property and to launch prosecution in the designated special court.
- The actions that can be taken against the persons involved in money laundering are attachment of property, seizure or freezing of property and records, imprisonment for a term which shall not be less than 3 years but may extend up to 7 years along with fine and in case of offences committed under the Narcotics and Psychotropic Substances Act, 1985, imprisonment of not less than 3 years which may extend up to 10 years and liable to fine also.
- The investigating officers have the powers to provisionally attach any property derived as a result of criminal activity, to conduct survey of a place or search of building, place, vessel, vehicle or aircraft and seize or freeze records and property, can conduct personal search, can arrest or summon and record the statements of persons concerned. The property or record, if seized cannot be retained for more than the period of 180 days unless the adjudicating authority permits.
- The persons claiming or entitled to claim any interest in the enjoyment of immovable property can enjoy the property during the period of provisional attachment [Section 5(4)]. If it is decided by the adjudicating authority that any property is involved in money laundering, he will confirm the attachment of the property which will continue during the pendency of the proceedings and becomes final after an order of confiscation has been passed.
- If on conclusion of trial, the special court finds that the offence has been committed, it shall order for confiscation of such property after which all the rights and title in such property shall vest absolutely in the central government which otherwise may release the property. Any person aggrieved by the order of

the adjudicating authority may file an appeal to the appellate tribunal within 45 days and can be allowed thereafter if it is satisfied that there was sufficient reason for not filing it within the period. Any person aggrieved by the order of the appellate tribunal may file an appeal to the High Court within 60 days from the order of the appellate tribunal. For trial of offences punishable under Section 4 of PMLA 2002, the central government has designated one or more courts of session as special court.

- 'Contracting State' means any country or place outside India in respect of which arrangements have been made by the central government with the government of such country through a treaty or otherwise (Sec. 55).

5.5.9 The Micro, Small and Medium Enterprises Act, 2006[22]

- The objective of the act is the promotion and development of the micro, small and medium enterprises as well as enhancing the competition and also empowers the central government to provide instruction and guidelines for the same. The act provides for the establishment of the National Board for micro, small and medium enterprises with its head office at New Delhi.
- The board consists of the Minister and the Minister of the State or Deputy Minister in charge of the ministry which has the administrative control of the micro, small and medium enterprises and will be the Ex-Officio Chairman and Vice-Chairman, respectively, of the board, the Secretary to the department of the Government of India which has the administrative control of the micro, small and medium enterprises, three members of the parliament; two from House of the People and one from Council of States, administrator of a Union territory appointed by the central government, four secretaries to the government of India to represent the central ministries dealing with commerce and industry, finance, food processing industries, labour and planning appointed by the central government, chairman of the National bank and the Small Industries bank and so on.
- The main functions of the board are to examine the factors that affect the promotion and development of micro, small and medium enterprises and to review the policies and programmes of the central government and the impact of the same on such enterprises, giving recommendations on matters referred to it by the central government regarding the promotion, development and enhancing the competitiveness of the micro, small and medium enterprises, and so on.
- According to Sec. 7 of the Act, in case of a manufacturing enterprise, enterprises with investment in plant and machinery less than twenty five lakh, between twenty five lakh and five crore and between 5 and 10 crores are known as a micro enterprise, small scale enterprise and a medium enterprise, respectively. In case of enterprises providing services, enterprises with investments in the equipment less than 10 lakh rupees, between 10 lakh and 2 crores and between 2 and 5 crores are known as micro enterprise, small enterprise and medium enterprise, respectively.
- Any person who wants to establish a micro, small or medium enterprise engaged in providing services or manufacturing of goods will have to file a memorandum with such authority as specified by the state government and the central government.
- The policies for the credit to these enterprises are according to the guidelines issued by the RBI which ensures timely and smooth flow of credit and minimise the possibility of sickness as well as enhance the competitiveness.

[22]http://ibcham.org/Documents/MSME%20Act%202006.pdf

- The buyer of the goods and services will have to make the payment to the supplier on or before the agreed date and the agreed date should not exceed 45 days from the day of acceptance, and on failure of payment in the required time the buyer will be liable to pay monthly compound interest to the supplier from the agreed date at three times the bank rate notified by the Reserve Bank of India. In case of any dispute regarding the payment, the matter can be referred to the Micro and Small Enterprise Facilitation Council.[23]
- If a buyer is required to get his annual accounts audited, he will have to furnish the details regarding the principal amount and the interest remaining unpaid to the supplier, at the end of the accounting year. The amount of interest so payable to the supplier will not be allowed as the deduction while calculating income under the Income Tax Act, 1961.

5.5.10 Payment and Settlement Systems (PSS) Act, 2007[24]

- This act came into force on 12 August, 2008. The primary objective of PSS Act, 2007 is to regulate and supervise the payment systems and to designate the Reserve Bank of India to act as the authority for all the related matters.
- The Reserve Bank has been authorized to constitute a Committee called Board for Regulation and Supervision of Payment and Settlement Systems (BPSS), for exercising the powers and performing its functions and discharging the duties.
- This act provides two regulations made by the Reserve Bank of India, namely, the BPSS Regulations, 2008 and the Payment and Settlement Systems Regulations, 2008. Both came into force along with this Act, on 12 August, 2008. The BPSS is a committee of the Central Board of Directors of the Reserve Bank of India.
- The Payment and Settlement Systems Regulations, 2008 covers matters like form of application for authorization for commencing/carrying on a payment system and grant of authorization, payment instructions and determination of standards of payment systems, furnishing of accounts and balance sheets by system provider and so on.
- Payment obligation is what is owed by one participant in a payment system to another such participant, which results from clearing or settlement or payment instructions. Payment Instruction is an instrument, authorization or order to effect a payment by a person to a participant in a payment system. The payment instruction can be communicated either through an instrument like a cheque or through electronic means. Settlement means the settlement of payment instructions received and can take place either on a net or gross basis. A payment system is a system that enables payment to be effected between a payer and a beneficiary, involving clearing, payment and so on and includes the systems enabling credit card, debit card, smart card, money transfer operations and so on. An entity must perform either the clearing or settlement or payment function or all of them in order to be a payment system.
- No one other than the Reserve Bank can operate or commence a payment system unless authorized by the Reserve Bank and needs to apply for authorization of commencing or operating a payment system. All

[23]The Micro and Small Enterprise Facilitation Council consists of three to five members with Director of Industries of the state government, one or more representative of associations of micro and small scale enterprise, one or more representative of banks and financial institutions lending to micro and small enterprise and one or more persons having knowledge of industry, finance, law, trade or commerce.
[24]https://rbi.org.in/scripts/FAQView.aspx?Id=73; https://rbidocs.rbi.org.in/rdocs/Publications/PDFs/86706.pdf

entities operating payment systems or the foreign entities are also allowed to operate a payment system in India but, after getting a license or approval or authorization from Reserve Bank before commencing operations. The PSS Act does not restrict the types of payment systems/services that a foreign entity can provide, but it must be in accordance with the legal framework of India. Foreign entities such as card networks like MasterCard (Singapore), Visa Worldwide Pvt. Limited (Singapore) and so on got the authorization under the PSS Act and are operating card schemes in India.

- The Reserve Bank will consider various factors before giving authorization, like the need, technical standards and design, security procedures and terms and conditions of operation of the proposed system as well as the procedure for netting of payment instructions, risk management processes, financial status, experience and integrity of applicant, consumer interests, and so on. The Reserve Bank can refuse to grant authorization but has to give a written notice to such an applicant giving the reasons for refusal and also a reasonable opportunity of being heard. It is also empowered to revoke the authorization already granted, if the concerned service provider contravenes the provisions of the act, do not comply with the orders or violates the terms and conditions of the authorization.
- The Reserve Bank also has the powers to give directions regarding the format, size, and shape, timings to be maintained, method of funds transfer and so on.
- In order to ensure the compliance of the provisions of the Act, the Reserve Bank can depute an officer authorized to inspect the premises of the service provider. Reserve Bank can conduct an on-site inspection. But foreign entities in overseas jurisdictions may be exempted from certain requirements applicable to domestic payment systems.
- The Reserve Bank can issue directions to a payment system to cease from engaging in any act or omission or direct it to perform such acts as are necessary in the interest of the smooth operation of the payment system. In case of insolvency or dissolution of any system provider, no law will affect any settlement which has become final and irrevocable and his right to appropriate the collaterals contributed by the system participants for settlement.
- There are various duties of the system provider like the operation of the payment system in accordance with the provisions of the Act, to act in line with the contract governing the relationship among the system participants, to disclose the terms and conditions and to provide copies of all the rules and regulations governing the operation of the payment system to the system participants and so on. Dishonour of an electronic fund transfer instruction due to insufficiency of funds in the account and so on is an offence punishable with imprisonment or with fine or both.

5.5.11 Issue of Capital and Disclosure Requirements Regulations Act, 2009[25]

- The issuer will not make a public issue or a right issue if the issuer, any of its promoters or directors are debarred from accessing the capital market by the board, the issuer of the convertible debt instruments is in the list of the wilful defaulters, unless it has made an application to one or more stock exchanges for the listing of the securities, unless it has entered into an agreement with a depository for dematerialization of the specified securities, unless all the shares are fully paid up and so on.

[25]http://resource.cdn.icai.org/41057bos30846cp19.pdf; http://www.sebi.gov.in/guide/sebiidcrreg.pdf; http://www.sebi.gov.in/cms/sebi_data/attachdocs/1456380272563.pdf

- One or more merchant banker should be appointed by the issuer, at least one of whom to be the lead manager and other intermediaries are also to be appointed in consultation with the lead merchant banker by the issuer. Only those who are registered with the board are to be appointed. Where the issue is managed by more than one merchant banker, the rights, obligations and responsibilities of each merchant banker shall be predetermined. A registrar will be appointed by the issuer.
- In case of a book built issue, the lead merchant banker appointed by the issuer will act as the lead book runner. Before issuing a public issue or a rights issue and where the aggregate value of the specified securities is fifty lakh rupees or more, a draft offer document along with the fees has to be filed with the board through the lead merchant banker, 30 days prior to registering the prospectus with the registrar of the companies or filing the letter of offer with the stock exchange. In principle, approval has to be obtained from all the recognized stock exchanges, where the issuer proposes to list its securities before making a public offer. The lead merchant banker has to submit a certificate confirming that an agreement has been entered into between the issuer and the lead merchant banker according to the format, a due diligence certificate, a due diligence certificate from the debenture trustee in case of an issue of convertible debt instruments, and a certificate confirming compliance of the condition specified in part C of schedule VIII before opening of the issue.
- The issuer has to submit the permanent account number, bank account number and the passport number of the promoters to the stock exchange where the specified securities are proposed to be listed at the time of filing draft offer document.
- If the issuer desires to underwrite the issue, for the public issue (other than through book building process) or rights issue, will appoint the underwriters in accordance with Securities and Exchange Board of India (Underwriters) Regulations, 1993. The lead merchant bankers or the lead book runner will undertake minimum underwriting obligations as specified in the Securities and Exchange Board of India (Merchant Bankers) Regulations, 1992, in case of every underwritten issue. If the offer is 100 percent underwritten through the offer document then the underwriting obligation will be for the entire 100 percent of the offer through offer document and will not be restricted up to the minimum subscription level. A minimum subscription of 90 percent of the offer through the offer document has to be received in an issue. In case of non-receipt of minimum subscription, all application money received shall be refunded to the applicants. The issuer shall not make any allotment in excess of the specified securities offered through the offer document. But in case of oversubscription, an allotment of not more than 10 percent of the total offer made to public may be made for the purpose of making allotment in minimum lots.
- The issuer will make arrangements for the monitoring of the use of the proceeds of the issue by the public financial institution or by a scheduled commercial bank named in the offer document as the banker of the issuer, if the issue size exceeds five hundred crore rupees, but this will not be applicable to an issue of specified securities made by a bank or public financial institutions or an insurance company.
- If the issuer has the intention to call the subscription monies in calls, then the subscription money has to be called within the 12 months from the date of allotment and if the applicant fails to pay the call money within the prescribed time, then such shares will be forfeited. It is not necessary to call the outstanding subscription money within 12 months if the issuer has appointed a monitoring agency. Either the specified securities should be allotted or the application money should be refunded within 15 days from the date of closure of the issue.

- An issuer making a public or rights issue of convertible debt instruments, in addition to other requirement, has to obtain the credit rating, appoint one or more debenture trustee, has to create debenture redemption reserve, should propose to create a charge or security on its assets in respect of secured convertible debt instruments and so on.
- The redemption of the convertible debt instrument should be done in terms of the offer document. Without the consent of the holders of the convertible debt instruments, the issuer shall not convert the optionally convertible debt instruments into equity shares.
- The issuer shall comply with the conditions of the initial public offer like, it should have net tangible assets of at least three crore rupees in each of the preceding 3 years out of which not more than 50 percent are held in the monetary assets, should have average pre-tax operating profit of rupees 15 crores during the three most profitable years out of the immediately preceding 5 years, should have a net worth of at least 1 crore rupees in each of the preceding 3 full years and so on.
- An initial public offer of convertible debt instruments without making a prior public issue of its equity shares and listing thereof can be made by the issuer. If the number of prospective allotees is less than one thousand, then the issuer will not make the allotment pursuant to a public issue. The issuer may determine the price of the specified securities and the coupon rate as well as the conversion price of the convertible debt instruments in consultation with the lead merchant banker or by the book building process.
- The issuer may also offer the specified securities at different prices which is known as differential pricing. The price of the specified securities offered to an anchor investor shall not be lower than the price offered to other applicants in case of book built issue, whereas in a composite issue, the price in the public issue may be different from the price offered in rights issue and justification for the same must be given in the offer document.
- A price or price band in the draft prospectus and floor price or price band in the red herring prospectus can be mentioned by the issuer and can finally determine the price at a later date before registering the prospectus with the registrar of companies but the prospectus shall contain only one price or the specific coupon rate.
- The floor price and price band in case of initial public offer should be announced at least five working days before the opening of the bid and at least one working day before the opening of the bid, in case of further public offer, in all those newspaper in which the pre-issue advertisement was released.
- The cap on the price band should not be less than or equal to 125 percent of the floor price whereas the floor price or the final price should not be less than the face value of the specified securities.
- An issuer making a public offer may determine the face value of the equity shares. If the issue price per equity share is 500 rupees or more, the issuer has the option to determine the face value at less than 10 rupees per equity share, but it should not be less than 1 rupee per equity share, whereas if the issue price per equity share is less than 500 rupees, the face value of the equity share shall be 10 rupees per equity share. The aforesaid provision will not be applicable to the government companies, statutory authority or corporation, and so on.
- The promoter contribution in case of initial public offer shall not be less than 20 percent of the post-issue capital whereas in case further public offer either up to 20 percent of the proposed issue size or up to the 20 percent of the post-issue capital.

- A record date should be announced for determining the shareholders eligible for the specified securities in the proposed rights issue by the listed issuer making the rights issue. After the announcement of the record date the rights issue cannot be withdrawn and if withdrawn, then the issuer shall not make an application for listing of any of his securities on any of the recognized stock exchange for a period of 12 months from the record date of announcement. The issue price is to be decided before determining the record date in consultation with the designated stock exchange. The rights issue will be open for a minimum period of 15 days and for a maximum period of 30 days for subscription. The issuer may give only one payment option, either for the part payment on the application and balance money to be paid in calls or full payment on application. If the part payment option has been given to the investors, the part payment on application should not be less than 25 percent of the issue prices.
- The issuer shall make an advertisement for the rights issue in at least one English national daily newspaper, one Hindi national daily newspaper and one regional language daily newspaper with wide circulation where the registered office of the issuer is situated, at least 3 days before the date of opening of the issue. All material disclosure should be made in the offer document, which should be true and adequate so that the applicants take an informed investment decisions.
- The qualified institutions placements are the allotment of the securities by a listed issuer to QIBs on private placement basis in terms of these regulations. The qualified institutions placement can be made by a listed issuer if a special resolution approving the qualified institutions placement has been passed by its shareholders. Merchant bankers registered with the board will manage the qualified institutions placement. The price, at which the qualified institutions placement is made, should not be less than the average of the weekly high and low of the closing prices of the equity shares of the same class quoted on the stock exchange during the 2 weeks preceding the relevant date.
- The allotment under the qualified institutions placement is subject to some conditions like, a minimum of 10 percent shall be allotted to the mutual fund and on denial of the mutual funds it should be allotted to the other qualified institutional buyer, the allotment should not be made to any qualified institutional buyer who is a promoter or any person related to the promoters of the issuer and so on. Withdrawal of the bids after the closure of the issue is not allowed to the applicants in qualified institutional placements. No single qualified institutional buyer shall be allotted more than 50 percent of the total issue size. The allotment should be completed within a period of 12 months from the date of passing of the resolution. The total of all the qualified institutions placements made by the issuer in the same financial year shall not exceed five times the net worth of the issuer, according to the audited balance sheet of the previous financial year. The securities allotted under qualified institutions placement should not be sold up to 1 year from the date of allotment except on a recognized stock exchange.
- Under the institutional placement program, no partly paid up securities can be offered and the issuer should obtain an in principle approval from the stock exchange. A floor price or the price band should be announced at least 1 day prior to the opening of the institutional placement program. The allotment or allocation can be done by the eligible seller on the proportionate basis, price priority basis or on the basis of the criteria mentioned in the offer document.
- Under the institutional placement program, the issuer shall accept the bids using ASBA facility only and bids made by the applicants will not be revised downwards or withdrawn. For each offer of the eligible securities made under institutional placement program, the minimum number of allottees should not be less than 10 as well as no single allottee shall be allotted more than 25 percent of the issue size. As a

result of the institutional placement program made by the eligible seller, the aggregate of all the tranches shall not result in increase in public shareholding by more than 10 percent or such lesser percent as is required to reach minimum public shareholding. In case of oversubscription, an allotment of not more than 10 percent of the offer size shall be made by the eligible seller. The issue must be kept open for a minimum of 1 day or maximum of 2 days. The offer can be withdrawn in case of under subscription by the eligible seller.

- The bonus shares can be issued by the listed seller only if, it is authorized by its articles of association for issue of bonus shares, capitalization of reserves, has not defaulted in the payment of interest and principal of the fixed deposits or any other issued debt securities, has not defaulted in the payment of the statutory dues of the employees like PF, gratuity and so on, and the partly paid shares are made fully paid up. The free reserves built out of the genuine profits or securities premium collected in cash only will be used for the bonus issue. The reserves created by revaluation of fixed assets shall not be capitalized for issuing bonus shares. The bonus shares will not be issued in lieu of dividend. Once the decision of making a bonus issue has been announced, the issue cannot be withdrawn.
- The issuing company is eligible for making an issue of IDR (Indian Depository Receipt) if it is listed in its home country, is not prohibited from issuing securities by any regulatory body and has the track record of complying with the securities market regulations in its home country. The issue size of the IDR should not be less than fifty crore rupees and the minimum application amount is twenty-five thousand rupees. In addition to this, at least 50 percent of the IDR issued shall be allotted to qualified institutional buyer on the proportionate basis.

5.5.12 The Companies Act, 2013[26]

- The new Companies Act, intends to improve corporate governance, strengthens the interests of minority investors and emphasize on the role of whistle blowers.
- A registered company is a legal personality and has separate existence from its members. It is an artificial person having perpetual succession with limited liability of the members.
- A company may be incorporated as a one person company (OPC), private limited company or a public limited company. There are different types of companies like associate company, holding company, subsidiary company, foreign company, Government Company, small company, dormant company, Nidhi Company, companies formed for charitable objects, and so on.
- In case of the companies limited by shares, the liability of the members of a company is limited by its memorandum of association to the amount, if any unpaid on the shares held by them Section 2(22)), whereas if the liability of the members is limited by the memorandum to such amount as the members may undertake to contribute to the assets of the company in the event of it being wound up, is known as company limited by guarantee (Section 2(21)) and the members cannot be called upon to contribute beyond that stipulated sum. Unlimited company imposes unlimited liability on its members (Section 2(92)).
- OPC has only one person as its member [Sec. 2(62)] and has been introduced for encouraging entrepreneurship and corporatization of business. OPC is different from sole proprietorship as OPC is a separate legal entity with a limited liability of the member whereas in sole proprietorship the liability of

[26]http://www.mca.gov.in/Ministry/pdf/CompaniesAct2013.pdf; http://resource.cdn.icai.org/38523bos28158mod2-cp6.pdf

the owner extends to his entire assets. OPC is a private limited company with a minimum paid-up share capital of ₹1 lakh and with at least one member which can be the sole member as well as the director of the company [Sec. 3(1)(c). A *private limited company* restricts the right to transfer its shares, limits the number of its members to 200 (except in case of OPC) and does not invite the public to subscribe its shares. For establishing a *Public limited company*, a minimum paid-up share capital of 5 lakh rupees or such higher paid-up capital as may be prescribed and seven or more members are required. *Subsidiary company* means a company in which the holding company controls the composition of the Board of Directors, exercises or controls more than one-half of the total share capital either at its own or together with one or more of its subsidiary companies [Sec. 2(87)]. Companies can be divided into listed company and unlisted company on the basis of access to capital. *Listed company* [2(52)] has its securities listed on any recognized stock exchange. An *unlisted company* means a company other than the listed company. In a *Government company*, not less than 51 percent of the paid-up share capital is held by the central government or by any state government or governments or partly by the central government and partly by one or more state governments. *Foreign companies* are incorporated outside India but has a place of business in India. Companies are also formed to promote the charitable objects of commerce, art, science, sports, education, research, social welfare, religion, charity, protection of environment and so on and apply its profit in promoting its objects and prohibit the payment of any dividend to its members (Sec. 8). *Dormant company* is formed for a future project or to hold an asset or intellectual property and has no significant accounting transaction. *Nidhi* companies are incorporated with the object of cultivating the habit of thrift and savings among its members, receives deposits and lends to its members only for their mutual benefits. A public company can be converted into a private company by passing a special resolution and altering its articles and including the restrictions contained in Section 2(68) of the Act. It is binding on the shareholders provided the conversion is *bona fide*, is in the interest of the company and is consistent with the objects contained in the memorandum of association of the company.

- The registered company has perpetual succession and a common seal with power to acquire, hold and dispose of property to contract and can sue and be sued in its own name. The incorporation makes the company a legal personality separate from the members and is a binding contract between the company and its members. It has perpetual existence, that is, members may come, members may go but the company goes on forever, until it is wound up and has the common seal. The Memorandum of Association of company is the charter of the company and defines its constitution and the scope of its powers.
- The company can purchase its own shares by its free reserves, the securities premium account and by the proceeds of the issue of any shares or other specified securities (Sec. 68). However, buy-back cannot be made out of the proceeds of an earlier issue of the same kind of shares [Sec. 68(1)]. The buy-back should be authorized by the articles and a special resolution regarding it should be passed in the general meeting of the company. Buy-back of shares may be from the existing shareholders on a proportionate basis or from the open market or by purchasing the securities issued to employees of the company under the stock option or sweat equity scheme. The company which has completed the buy-back of its shares is not allowed to make further issue of same kind of shares within a period of 6 months except by way of bonus issue or in the discharge of subsisting obligations such as conversion of warrants, stock option schemes, sweat equity or conversion of preference shares or debentures into equity shares.

- The subscriber to the memorandum of the company and every other person who agrees in writing to become a member and whose name has been entered in the register of members as well as every person holding shares of the company and whose name is entered as a beneficial owner in the records of a depository is the member of the company. A person can also become a member by the transfer and transmission of shares. A minor or a lunatic cannot become a member of the company. Minor can become member by transfer or transmission, but a company may not allow a minor to be a member by allotment. The company shall not hold any shares in its holding company and no holding company shall allot or transfer its shares to any of its subsidiary companies and if done, shall be void. Membership is terminated on the removal of the person's name from the register of members for some justified reason like transfer of all of his shares, forfeiture of shares, shares surrendered or sold to enforce a lien, redemption of preference shares, transfer to legal representative on death, on becoming insolvent and the Official Assignee or Receiver is appointed in this regard and so on.
- A registered member may not be a shareholder as in case of the company limited by guarantee and not having a share capital. It has the members, but not the shareholders. But a registered shareholder is a member because his name is entered in the register of members. The person having the share warrant is not the member since his name is not present in the register of members and he is the shareholder only. A legal representative of a deceased member is a shareholder, but not a member until he applies for registration and his name is entered in the register of members.
- The company shall not issue shares at a discount, except in the case of an issue of sweat equity[27] shares and any such allotment shall be void. Every company except OPC must hold a general meeting in addition to any other meetings in each year known as annual general meeting (AGM). There should not be a gap of, more than 15 months between the date of one AGM of a company and that of the next. The AGM should be held within a period of 6 months, from the end the financial year. The first AGM should be held within a period of 9 months from the date of closing of the first financial year. If the first AGM is held as aforesaid, it is not necessary for the company to hold any AGM in the year of its incorporation. The AGM can be extended by a period not exceeding 3 months by the Registrar for any special reason but is not applicable for the first AGM.
- There are various matters for which it is not always possible to wait until the next annual meeting. Such meetings are known as extraordinary general meetings which are held between two AGMs. Meetings of members of a company are divided into general meetings and class meetings. Class meetings are meeting of a particular class of shareholders and are held if the rights attaching to these shares are to be varied. Only members of the particular class concerned may attend and vote at the meeting. Preference shareholders can vote only in relation to the matters affecting their rights. The resolutions are passed in the meetings in order to give effect to the decisions taken. These resolutions can be ordinary resolution or special resolution.
- Quorum means the minimum number of members who must be present in order to constitute a valid meeting and transact the business thereat. It represents the number of members which are necessary to be present in the meeting of the company in order to commence its deliberations. Under Sec. 103, unless the Articles provide for larger number, 5, 15 or 30 members, personally present depending upon the number of members as on date of meeting, less than 1000, from 1000 to 5000 or exceeding 5000, respectively,

[27]Sweat equity shares are issued by a company to its directors or employees at a discount or for consideration, other than cash, for providing know-how or making available rights in the nature of intellectual property rights or value additions.

in the case of a public company and two in the case of any other company are required to form the quorum for a general meeting. If the quorum is not present within half-an-hour from the stipulated time for holding the meeting, the meeting shall stand adjourned to the same day in the next week at the same time and place, or to such other date, time and place as the board may determine or the meeting, if called by requisitionists (under Sec. 100), shall stand cancelled. If at the adjourned meeting also, the quorum is not present within half-an-hour from the time appointed for holding meeting, the members present will constitute the quorum. Proxy are also appointed, which is an instrument in writing executed by a shareholder authorizing another person to attend a meeting and to vote thereat on his behalf and in his absence.

- The company being an artificial person is managed through the directors. A public limited company has minimum of three directors whereas the private limited company has at least two directors. The minimum number of directors in an OPC is one. The maximum number of directors that any company can have is 15. Every listed company or every other public company having a paid-up share capital of ₹100 or more or turnover of ₹300 crore or more shall appoint at least one woman director in its board. According to Sec. 149(3), a company will have to appoint at least one director who has stayed in India for a total period of not less than 182 days in the previous calendar year. Such director is known as resident director. Sec. 149(4) requires every listed company to have at least one-third of the total number of directors as independent directors. A person cannot be appointed as the director of the company unless he has been allotted the Director Identification Number (DIN). Under the new Companies Act, 2013, a person who has failed to get appointed as a director in a general meeting cannot be appointed as the additional director. An alternate director is not allowed to hold office for a period longer than that permissible to the original director in whose place he has been appointed and shall vacate the office when the original director returns to India. According to Sec. 165(1), no one is allowed to hold office as director including alternate directorship, in more than 20 companies at the same time.
- Company remains in existence until it is dissolved by the law. After dissolution the company ceases to exist. It can be dissolved by the following ways: (i) by removing the name of the company from the register by the registrar, (ii) by the order of the court or central government under Sec. 396, and (iii) by winding up.

5.5.13 The Pension Fund Regulatory and Development Authority Act, 2013[28]

- The Pension Fund Regulatory and Development Authority Act (PFRDA), 2013 received the assent of the President on 18 September, 2013 for establishing an authority to promote old-age-income security by establishing, developing and regulating pension funds and for protecting the interests of subscribers to schemes of pension funds. It extends to the whole of India.
- For achieving the objective, the central government established an authority called the Pension Fund Regulatory and Development Authority, a body corporate having perpetual succession, a common seal with the power to acquire, hold and dispose property, both movable and immovable, and to contract and shall, by the said name, sue or be sued.
- The Authority shall consist of a chairperson, three whole-time members and three part-time members to be appointed by the central government from among persons of ability, integrity and standing and one

[28]http://npstrust.org.in/images/PFRDA20132326723328.pdf

person each having knowledge and experience in economics, finance or law. The term of the chairperson and every whole-time member will be of 5 years from the date on which he enters upon his office and shall be eligible for reappointment up to a maximum age of 65 years for chairman and 62 years for the whole-time member. The tenure of the part-time member will be of 5 years. A member may relinquish his office, by giving a notice of at least 30 days in writing to the central government. The chairperson or any other member may be removed by the central government if he has been adjudged as insolvent, has become physically or mentally incapable of acting as a member, or has been convicted of an offence which, in the opinion of the central government, involves moral turpitude, or has acquired such financial or other interest which is likely to affect prejudicially his functions or has abused his position so as to render his continuance in office, detrimental to the public interest, after been given a reasonable opportunity of being heard. The chairperson and the whole-time members are not eligible for any employment either under the central government or under any state government or in any regulated entity in the pension sector from the date on which they cease to hold office, except with the previous approval of the central government for a period of 2 years.

- The PFRDA has the authority to regulate the National Pension System[29] and the pension schemes, to approve the schemes, the terms and conditions and laying down norms for the management of the corpus of the pension funds, to issue to an intermediary, on application, a certificate of registration and renewing, modifying, withdrawing, suspending or cancelling such registration, protecting the interests of subscribers, establishing mechanism for redressal of grievances, adjudication of disputes between intermediaries and between intermediaries and subscribers, regulating the regulated assets, levying fees or other charges for carrying out the purposes of this Act, specifying by regulations the form and manner in which books of account shall be maintained and statement of accounts shall be rendered by intermediaries, summoning and enforcing the attendance of persons and examining them on oath, inspection of any book, register and other document of any person or intermediary and so on.
- Where the Authority has a reasonable ground to believe that the activities of the pension fund are being conducted in a manner detrimental to the interest of the subscribers or any intermediary or any person associated with the schemes of the pension fund has violated any of the provisions of this Act or directions issued by the Authority, it may at any time, by order in writing, direct any person specified in the order to investigate the affairs of such intermediary or persons associated with the pension fund and if found guilty, the authority may pass an order requiring such person to cease and desist from committing such violation.

5.5.14 Insurance Regulatory and Development Authority of India Act 1999

This Act was passed by the Parliament in December 1999 and it received presidential assent in January 2000. Under this Act, an authority called Insurance Regulatory Development Authority (IRDA) is established. The aim of the IRDA is 'to protect the interest of holders of Insurance policies to regulate, promote and ensure orderly growth of Insurance industry & for matters connected therewith or incidental thereto'.The IRDA shall consist of the following members, namely (i) a Chairperson, (ii) not more than five whole-time members and (iii) not more than four part-time members. All these members are appointed by the Central Government from among persons of ability, integrity and standing who have knowledge or experience in life

[29]The details are provided in Chapter 10 of this book.

insurance, general insurance, actuarial science, finance, economics, law, accountancy, administration or any other discipline. The Chairperson and every other whole-time member shall hold office for a term of 5 years from the date on which he enters upon his office and shall be eligible for reappointment. No person shall hold office as a Chairperson after he has attained the age of 65 years. The Authority shall have the duty to regulate, promote and ensure orderly growth of the insurance business and re-insurance business. The powers and functions of the Authority shall include (i) issue to the applicant a certificate of registration, renew, modify, withdraw, suspend or cancel such registration, (ii) protection of the interests of the policy holders in matters concerning assigning of policy, nomination by policy holders, insurable interest, settlement of insurance claim, surrender value of policy and other terms and conditions of contracts of insurance, (iii) specifying requisite qualifications, code of conduct and practical training for intermediary or insurance intermediaries and agents, (iv) specifying the code of conduct for surveyors and loss assessors, (v) promoting efficiency in the conduct of insurance business, (vi) promoting and regulating professional organisations connected with the insurance and re-insurance business, (vii) calling for information from, undertaking inspection of, conducting enquiries and investigations including audit of the insurers, intermediaries, insurance intermediaries and other organisations connected with the insurance business, (viii) control and regulation of the rates, advantages, terms and conditions that may be offered by insurers in respect of general insurance business not so controlled and regulated by the Tariff Advisory Committee under section 64U of the Insurance Act, 1938 (4 of 1938), (ix) specifying the form and manner in which books of account shall be maintained and statement of accounts shall be rendered by insurers and other insurance intermediaries, (x) regulating investment of funds by insurance companies and maintenance of margin of solvency, (xi) adjudication of disputes between insurers and intermediaries or insurance intermediaries and (xii) specifying the percentage of life insurance business and general insurance business to be undertaken by the insurer in the rural or social sector. IDRA has the power to make the rules for insurance companies. IRDA may establish the Insurance Advisory Committee for the development of the insurance sector in India

5.6 FINANCIAL SELF-REGULATION

LO 5

Explain the concept of financial self-regulation, its features, benefits and limitations

Financial policymakers today generally recognise that sound and stable long-term economic growth can best be supported by regulatory policies that minimise interference with the functioning of the market. Financial sector reforms in developing economies are thus increasingly oriented toward mechanisms to induce effective market discipline, and towards regulatory/supervisory regimes that are market-friendly or that mimic the market in driving agent decisions through incentives to honest and prudent behaviour. Honest and prudent behaviour by a financial market institution is integral to its reputational capital, which, in turn, increases its franchise value. Private sector agreement on principles and rules for self-regulation can provide incentives for that honest and prudent behaviour. Self-regulation, in turn, tends to emerge and to be effective when the franchise values of individual businesses in a community stand to receive a considerable boost from cooperation to reduce the costs to deal with limited trust and asymmetric information. Thus, agents have a strong interest in establishing long-term mutual ties to enforce honest and prudent behaviour through self-policing arrangements, that is, to the capability of a system of private-sector agents to induce compliance with common rules of conduct from each agent, without resorting to exogenous rule-enforcing mechanisms. Self-policing can either be the result of

agents having incentives to undertake behaviour that conforms to the collective interest, or the outcome of agents having an incentive to mutually monitor behaviour (Klein, 1997 and 1997a).

5.6.1 Basic Features of Financial Self-Regulation

Spontaneous self-policing arrangements can be found in the history of international trade and commercial law, public security, maintenance of public services and commercial bank clearinghouses. In developing countries, such arrangements are used for governing and managing natural resources, also known as common pool resources. Self-policing arrangements allow participants to undertake transactions that would otherwise be unprofitable due to high transaction costs (Ostrom 1990). Self-policing arrangements may develop within financial communities as well (Goodhart 1988). In some cases, they evolve into full-fledged self-regulatory organisations (SROs), with internal statutory rules; dedicated financial resources; formal structures involving shareholders, managers and employees; codes of conduct and oversight procedures (Glaessner 1993). SROs could involve payments and securities settlement systems, interbank deposit markets, securities trading and stock exchanges, securities lending and clearinghouse services, deposit insurance or credit information-sharing systems. SRO responsibilities could encompass: (a) regulation of market transactions, (b) regulation of market participants, (c) disputes resolution and enforcement actions, and (d) pre-commitment of resources.

5.6.2 Limitations and Benefits of Self-Regulation

Limitations of financial self-regulation are as follows:

1. SROs might transform themselves into cartels and jeopardise competition.
2. Short-term tensions between the managers and the authorities responsible for SROs—such as, for example, on the looseness in listing requirements—might either discourage participation or diminish long-term confidence in the market.
3. Scarcity of institutional and human resources may constrain the quality of oversight.
4. Lack of reasonably homogeneous institutions could impede the formation of balanced structures within SROs.
5. With limited competition in securities markets, self-regulation may not be enough to ensure safe and efficient markets.

With these limitations, financial self-regulation in developing economies could help improve the efficiency-stability trade-off because of their knowledge and experience, and commercial interest. SRO members are better placed than government bureaucrats to design rules consistent with the operational features of their business, to keep their operational processes and infrastructures a pace with technological progress, and to improve their business standards. In particular, since information is vital to each SRO member, an SRO setting is better positioned than government regulatory agencies to achieve enforcement of disclosure rules through peer monitoring. Being a part of the industry, in economies with liberalised and open financial markets, SRO owners and managers have an incentive to keep up with the institutional and organisational developments in other economies. The SRO model offers an appropriate institutional setting to develop market microstructures that facilitate securities trading and market liquidity. Finally, incentives to induce private-sector self-policing would mobilise resources that would complement the public sector's scarce resources used to enforce rules and best practice standards.

SUMMARY

- Regulation in its broadest sense includes establishing specific rules of behaviour, or regulatory aspect *per se*, monitoring or tracking observance of behaviour and supervision or oversight of the compliance with specific rules in the overall behaviour along with disincentives and penal provisions for non-compliance.
- The objectives of regulation are to avoid monopoly power, foster competition, and protect the consumer's interest.
- Broadly, there are two types of economic regulations (i) structural regulation and (ii) conduct regulation.
- There are four regulatory approaches such as Integrated Approach, Twin Peaks Model, Functional Approach and Institutional Approach used across the globe.
- The major regulators in India are Reserve Bank of India (RBI), Securities and Exchange Board of India (SEBI), Insurance Regulatory Development Authority (IRDA) and Pension Fund Regulatory Development Authority (PFRDA).
- Different Acts passed by the Parliament on which the regulatory measures are based are The Banking Regulation Act, 1949; The Securities Contracts (Regulation) Act, 1956; Securities and Exchange Board Act, 1992; The Depositories Act, 1996;The Foreign Exchange Management Act, 1999; The Competition Act, 2002; The Securitization and Reconstruction of Financial Assets and Enforcement of Security Interest (SARFAESI) Act, 2002; Prevention of Money Laundering Act, 2002; The Micro, Small and Medium Enterprises Act, 2006; Payment and Settlement Systems (PSS) Act, 2007; Issue of Capital and Disclosure Requirements Regulations Act, 2009; The Companies Act, 2013 and The Pension Fund Regulatory and Development Authority Act, 2013.
- Financial sector reforms in developing economies are thus increasingly oriented towards mechanisms to induce effective market discipline and towards regulatory/supervisory regimes that are market-friendly or that mimic the market in driving agent decisions through incentives to honest and prudent behaviour.

KEY TERMS

Financial Regulation
Twin Peaks Model
Social Regulation
Self-Regulation
Chicago Theory of Regulation
Conduct Regulation
Multiple Regulator
Structural Regulation
Single Regulator
Market Failure

QUESTIONS

1. What is regulation? Briefly explain the various theories of regulation.
2. Explain the various regulatory approaches.
3. Compare and contrast the single versus multiple regulatory approaches.
4. Analyse the features, benefits, and limitations of self-regulation in financial market.
5. Write short notes on following

(i) The Banking Regulation Act, 1949

(ii) The Securities Contracts (Regulation) Act, 1956

(iii) Securities and Exchange Board Act, 1992

(iv) The Depositories Act, 1996

(v) The Foreign Exchange Management Act, 1999

(vi) The Competition Act, 2002

(vii) The Securitization and Reconstruction of Financial Assets and Enforcement of Security Interest (SARFAESI) Act, 2002

(viii) Prevention of Money Laundering Act, 2002

(ix) The Micro, Small and Medium Enterprises Act, 2006

(x) Payment and Settlement Systems (PSS) Act, 2007

(xi) Issue of Capital and Disclosure Requirements Regulations Act, 2009

(xii) The Companies Act, 2013

(xiii) The Pension Fund Regulatory and Development Authority Act, 2013

The Reserve Bank of India

6
CHAPTER

Learning Objectives

- **LO 1** Know the organisation, management and functions of the RBI
- **LO 2** Understand Monetary Policy of the RBI and various techniques of Monetary Control
- **LO 3** Explain Monetary Policy Operations in India
- **LO 4** Discuss Market Stabilisation Scheme (MSS) and challenges to Monetary Policy in India
- **LO 5** Review the report of the expert committee to revise and strengthen the Monetary Policy Framework in India
- **LO 6** Compare the monetary policy operations of some developed and developing countries
- **LO 7** Describe the autonomy of the Central Bank

6.1 INTRODUCTION

The RBI, as the central bank of the country, is the centre of the Indian financial and monetary system. As the apex institution, it has been guiding, monitoring, regulating, controlling and promoting the destiny of the IFS since its inception. It is quite young compared with such central banks as the Bank of England (BoE), Riksbank of Sweden and the Federal Reserve Board of the United States. However, it is perhaps the oldest among the central banks in the developing countries. It started functioning from April 1, 1935 on the terms of the Reserve Bank of India Act, 1934. It was a private shareholders' institution till January 1949, after which it became a state-owned institution under the Reserve Bank (Transfer to Public Ownership) of India Act, 1948. This Act empowers the central government, in consultation with the Governor of the Bank, to issue such directions to it as they might consider necessary in the public interest.

6.2 ORGANISATION AND MANAGEMENT

LO 1
Know the organisation, management and functions of the RBI

The governor and all the deputy governors of the bank are appointed by the central government. The Bank is managed by a central board of directors, four local boards of directors, and a committee of the central board of directors. The functions of the local boards are to advise the central board on matters referred to them; they are also required to perform duties as are delegated to them. The final control of the bank vests in the central board which comprises the governor, four deputy governors, and 15 directors nominated by the central government. The committee of the central board consists of the governor, the deputy governors and such other directors as may be present at a given meeting.

The internal organisational set-up of the bank has been modified and expanded from time to time in order to cope with the increasing volume and range of the bank's activities. The underlying principle of the internal organisation is functional specialisation with adequate coordination. In order to perform its various functions, the bank has been divided and subdivided into a large number of departments. At present RBI has 26 departments, 28 regional offices and three training centres.

The Preamble of the RBI Act, 1934 states that 'Whereas it is expedient to constitute a Reserve Bank for India to regulate the issue of bank notes and keeping of reserves with a view to securing monetary stability in (India) and generally to operate the currency and credit system of the country to its advantage'. In this line the major objectives of RBI are as follows:

(i) To maintain monetary stability so that the business and economic life can deliver welfare gains of a properly functioning mixed economy.

(ii) To maintain financial stability and ensure sound financial institutions so that monetary stability can be safely pursued and economic units can conduct their business with confidence.

(iii) To maintain stable payments system so that financial transactions can be safely and efficiently executed.

(iv) To promote the development of financial infrastructure of markets and systems, and to enable it to operate efficiently, that is, to play a leading role in developing a sound financial system so that it can discharge its regulatory function efficiently.

(v) To ensure that credit allocation by the financial system broadly reflects the national economic priorities and societal concerns.

(vi) To regulate the overall volume of money and credit in the economy with a view to ensure a reasonable degree of price stability.

6.3 FUNCTIONS OF RBI

The RBI functions within the framework of a mixed economic system. With regard to framing various policies, it is necessary to maintain close and continuous collaboration between the government and the RBI. In the event of a difference of opinion or conflict, the government's view or position can always be expected to prevail. The major functions of RBI are as follows:

(i) Note Issuing Authority: The RBI has, since its inception, the sole right or authority or monopoly of issuing currency notes other than one rupee notes and coins, and coins of smaller denominations. The issue

of currency notes is one of its basic functions. Although one rupee coins and notes, and coins of smaller denominations are issued by the Government of India (GOI), they are put into circulation only through the RBI. The currency notes issued by the Bank are legal tender everywhere in India without any limit. At present, the Bank issues notes in the following denominations: ₹5, 10, 20, 50, 100, 500 and 2000. The responsibility of the Bank is not only to put currency into or withdraw it from circulation but also to exchange notes and coins of one denomination into those of other denominations as demanded by the public. All affairs of the Bank relating to note issue are conducted through its Issue Department. To facilitate the distribution of notes and rupee coins across the country, the Reserve Bank has authorised selected branches of banks to establish currency chests. There is a network of 4281 currency chests and 4044 small coin depots with other banks. Currency chests are storehouses where bank notes and rupee coins are stocked on behalf of the Reserve Bank. The currency chests have been established with State Bank of India, six associate banks, nationalised banks, private sector banks, a foreign bank, a state cooperative bank and a regional rural bank. Deposits into the currency chest are treated as reserves with the Reserve Bank and are included in the cash reserve ratio (CRR). The reverse is applicable for withdrawals from chests. Like currency chests, there are also small coin depots which have been established by the authorised bank branches to stock small coins. The small coin depots distribute small coins to other bank branches in their area of operation.

The Bank can issue notes against the security of gold coins and gold bullion, foreign securities, rupee coins, Government of India securities and such bills of exchange and promissory notes as are eligible for purchase by the Bank. The RBI notes have a cent percent backing or cover in these approved assets. Earlier, that is, till 1956, not less than 40 percent of these assets were to consist of gold coin and bullion and sterling/foreign securities. In other words, the proportional reserve system of note issue existed in India till 1956. Thereafter, this system was abandoned and a minimum value of gold coin and bullion and foreign securities as a part of total approved assets came to be adopted as a cover for note issue.

(ii) Government Banker: The RBI is the banker to the central and state governments. The Reserve Bank of India Act, 1934 requires the central government to entrust the Reserve Bank with all its money, remittance, exchange and banking transactions in India and the management of its public debt. The government also deposits its cash balances with the Reserve Bank. The Reserve Bank may also, by agreement, act as the banker to a state government. Currently, the Reserve Bank acts as banker to all the state governments in India, except Jammu and Kashmir and Sikkim. It has limited agreements for the management of the public debt of these two state governments. It provides to the governments all banking services such as acceptance of deposits, withdrawal of funds by cheques, making payments as well as receipts and collection of payments on behalf of the government, transfer of funds and management of public debt. Under the administrative arrangements, the central government is required to maintain a minimum cash balance with the Reserve Bank. Currently, this amount is ₹10 crore on a daily basis and ₹100 crore on Fridays, as also at the end of March and July. Under a scheme introduced in 1976, every ministry and department of the central government has been allotted a specific public sector bank for handling its transactions. Hence, the Reserve Bank does not handle government's day-to-day transactions as before, except where it has been nominated as banker to a particular ministry or department.

All the state governments are required to maintain a minimum balance with the Reserve Bank, which varies from state to state depending on the relative size of the state budget and economic activity. To tide over temporary mismatches in the cash flow of receipts and payments, the Reserve Bank provides ways and means advances (WMA) to the State Governments. The WMA scheme for the state governments has provision for

special and normal WMA. The special WMA is extended against the collateral of the government securities held by the State government. After the exhaustion of the special WMA limit, the state government is provided a normal WMA. The normal WMA limits are based on 3-year average of actual revenue and capital expenditure of the state. The withdrawal above the WMA limit is considered an overdraft. A state government account can be in overdraft for a maximum 14 consecutive working days with a limit of 36 days in a quarter. The rate of interest on WMA is linked to the repo rate. Surplus balances of state governments are invested in Government of India 14-day intermediate treasury bills (T-bills) in accordance with the instructions of the state governments.

(iii) Management of Public Debt: The Reserve Bank manages the public debt and issues new loans on behalf of the central and state governments. It involves issue and retirement of rupee loans, interest payment on the loan and operational matters about debt certificates and their registration. The union budget decides the annual borrowing needs of the central government. Parameters, such as, interest rate, timing and manner of raising of loans are influenced by the state of liquidity and the expectations of the market. The Reserve Bank's debt management policy aims at minimising the cost of borrowing, reducing the roll-over risk, smoothening the maturity structure of debt and improving depth and liquidity of government securities markets by developing an active secondary market. While formulating the borrowing programme for the year, the government and the Reserve Bank takes into account a number of factors, such as, the amount of central and state loans maturing during the year, the estimated available resources and the absorptive capacity of the market.

(iv) Bankers' Bank: The RBI, like all central banks, can be called a bankers' bank because it has a very special relationship with commercial and cooperative banks, and the major part of its business is with these banks. The bank controls the volume of reserves of commercial banks and thereby determines the deposits/ credit-creating ability of the banks. The Reserve Bank opens current accounts of banks with itself, enabling these banks to maintain cash reserves as well as to carry out inter-bank transactions through these accounts. Inter-bank accounts can also be settled by transfer of money through electronic fund transfer system, such as, the real time gross settlement system (RTGS). The banks hold a part or all of their reserves with the RBI. Similarly, in times of need, the banks borrow funds from the RBI. It is, therefore, called the bank of last resort or the lender of last resort. On the whole, the RBI is the ultimate source of money and credit in India.

(v) Supervising Authority: The RBI has vast powers to supervise and control commercial and cooperative banks with a view to developing an adequate and sound banking system in the country. It has, in this field, the following powers: (a) to issue licences for the establishment of new banks; (b) to issue licences for the setting up of bank branches; (c) to prescribe minimum requirements regarding paid-up capital and reserves, transfer to reserve fund and maintenance of cash reserves and other liquid assets; (d) to inspect the working of banks in India as well as abroad in respect of their organisational set-up, branch expansion, mobilisation of deposits, investments and credit portfolio management, credit appraisal, region-wise performance, profit planning, manpower planning and training and so on; (e) to conduct ad hoc investigations, from time to time, into complaints, irregularities and frauds in respect of banks; (f) to control methods of operations of banks so that they do not fritter away funds in improper investments and injudicious advances; (g) to control appointment, re-appointment, termination of appointment of the chairman and chief executive officers of private sector banks; and (h) to approve or force amalgamations.

(vi) Exchange Control (EC) Authority: One of the essential functions of the RBI is to maintain the stability of the external value of the rupee. It pursues this objective through its domestic policies and the regulation of

the foreign exchange market. As far as the external sector is concerned, the task of the RBI has the following dimensions: (a) to administer the 'foreign exchange control', (b) to choose the exchange rate system and fix or manage the exchange rate between the rupee and other currencies, (c) to manage exchange reserves, and (d) to interact or negotiate with the monetary authorities of the Sterling Area, Asian Clearing Union and other countries, and with international financial institutions such as the IMF, World Bank and Asian Development Bank. The RBI administers the 'exchange control' in terms of the Foreign Exchange Regulation Act (FERA), 1947 which has been replaced by a more comprehensive Foreign Exchange Regulation Act, 1973. The FERA is about to be replaced by the Foreign Exchange Management Act (FEMA) which would be consistent with full capital account convertibility and the objective of progressively liberalising capital account transactions. The objective of exchange control is primarily to regulate the demand for foreign exchange within the limits set by the available supply. This is sought to be achieved by conserving foreign exchange, by using it in accordance with the plan priorities, and by controlling flows of foreign capital. In India, during most of the years since 1957, foreign exchange earnings have been far less than the demand for foreign exchange, with the result that the latter had to be rationed in order to maintain exchange stability. This is done through exchange control which is imposed both on receipts and payments of foreign exchange on trade, invisible and capital accounts. The problem of foreign exchange shortage has been so persistent and acute that the scope of exchange control in India has steadily widened and the regulations have become progressively more elaborate over the years. The Bank administers the control through authorised foreign exchange dealers.

FERA lays down that the exchange rates used for the conduct of foreign exchange business must be those which are fixed by the RBI. The arrangements or the system under which exchange rate is fixed by the RBI has undergone many changes over the years. Till about 1971, as a member of the IMF, India had an exchange rate system of 'managed flexibility'. This arrangement changed during the 1970s as a result of international monetary crisis in 1971. Since 1975, the exchange rate of the rupee was being fixed in terms of the 'basket of currencies' till early 1990s. The evolution of different exchange rate systems in India will be discussed in detail in Chapter 25 on foreign exchange market. The RBI is the custodian of the country's foreign exchange reserves, and it is vested with the responsibility of managing the investment and utilisation of the reserves in the most advantageous manner. The RBI achieves this through buying and selling of foreign exchange from and to scheduled banks, which are the authorised dealers in the Indian foreign exchange market. The bank also manages the investment of reserves in gold accounts abroad and the shares and securities issued by foreign governments and international banks or financial institutions. The role of the RBI as a participant in the foreign exchange market, and as the stabiliser of that market and the rupee exchange rate has become all the more important with the introduction of the floating exchange rate system and the rupee convertibility on trade, current and capital accounts (the last one to take place in the near future). In the recent past, it has intervened significantly to achieve exchange rate stability.

(vii) Formulating Prudential Norms: To preserve and enhance the stability of the banking and financial system is an important part of the 'promotional' role of the RBI. In fact, financial stability has now assumed relatively greater importance as one of the tasks of the RBI. This is evident in its work to formulate prudential norms for banks and financial institutions, its intervention in the foreign exchange market, and its participation in the operation of 'safety nets', that is, the legal and organisational structure for overseeing the safety and soundness of the banking and financial systems. It plays an important role in building up and maintaining confidence in the underlying stability of the IFS. In short, the RBI helps to create and maintain a stable, efficient and well-functioning financial system in India.

(viii) Promoter of the Financial System: Apart from performing the functions already mentioned, the RBI has been rendering 'developmental' or 'promotional' services which have strengthened the country's banking and financial structure. This has helped in mobilising savings and directing credit flows to desired channels, thereby helping to achieve the objective of economic development with social justice. It has helped in deepening and widening the financial system. As a part of its promotional role, the bank has been pre-empting credit for certain sectors at concessional rates.

(ix) Regulation and Supervision of Payment System: The Reserve Bank, as the regulator of financial systems, has been initiating reforms in the payment and settlement systems to ensure efficient and faster flow of funds among various constituents of the financial sector. The increasing monetisation in the economy, the country's large geographic expanse, people's preference for paper-based instruments and rapid changes in technology are among factors that make this task a formidable one. The Reserve Bank has also taken steps towards integrating the payment system with the settlement systems for government securities and foreign exchange. To facilitate settlement of government securities transactions, it created the negotiated dealing system (NDS), a screen-based trading platform. The NDS facilitates the dealing process and provides for electronic reporting of trades, on-line information dissemination and settlement in a centralised system. For settlement of trade in foreign exchange, government securities and other debt instrument, it has set up the Clearing Corporation of India Limited (CCIL). This plays the role of a central counter party to transactions and guarantees settlement of trade, thus managing the counter party risk.

The Payment and Settlement Systems Act, 2007 provides for regulation and supervision of payment systems in India and designates the Reserve Bank as the authority for the purpose. As per the Act, only payment systems authorised by the Reserve Bank can be operated in the country. The Act also provides for the settlement effected under the rules and procedures of the system provider to be treated as final and irrevocable. The Reserve Bank has put in place an institutional framework and structure for oversight of the payment systems. In 2005, it created a Board for Regulation and Supervision of Payment and Settlement Systems (BPSS) as a committee of the central board. A new department called the Department of Payment and Settlement Systems (DPSS) was constituted to assist the BPSS in performing its functions

(x) Promoter of the Financial System and Economic Development: Apart from performing the functions already mentioned, the RBI has been rendering 'developmental' or 'promotional' services which have strengthened the country's banking and financial structure. This has helped in mobilising savings and directing credit flows to desired channels, thereby helping to achieve the objective of economic development with social justice. It has helped in deepening and widening the financial system. As a part of its promotional role, the bank has been pre-empting credit for certain sectors at concessional rates.

(a) Agricultural Sector: The RBI has rendered service in directing and increasing the flow of credit to the agricultural sector. It has been entrusted with the task of providing agricultural credit in terms of the Reserve Bank of India Act, 1934. The importance with which the RBI takes this function is reflected in the fact that since 1955, it has appointed a separate deputy governor in charge of rural credit. It has undertaken systematic studies on the problem of rural credit and has generated basic data and information in this area. This was first done in 1954 by conducting an all-India rural credit survey. And that was followed by studies of the All-India Rural Credit Review Committee in 1968, the Committee to Review Arrangements for Institutional Credit for Agriculture and Rural Development in 1978, and the Agricultural Credit Review Committee in 1986. As a part of its efforts to increase the supply of agricultural credit, the bank has been working to strengthen cooperative banking structure

through the provision of finance, supervision and inspection. It provides to cooperative banks (through state cooperative banks), short-term finance at a concessional rate for seasonal agricultural operations and marketing of crops. It subscribes to the debentures of land development banks. It operates the National Agricultural Credit (long-term operations) Fund and the National Agricultural Credit (Stabilisation) Funds through which it provides long-term and medium-term finance to cooperative institutions. It established the Agricultural Refinance Cooperation (now known as NABARD) in July 1963 for providing medium-term and long-term finance for agriculture. It also helped in establishing the Agricultural Finance Corporation.

(b) Industrial Finance: The role of the bank in diversifying the institutional structure for providing industrial finance has been equally important. All the special development institutions (SDIs) at the central and state levels and many other financial institutions mentioned earlier were either created by the bank on its own or it advised and rendered help in setting up these institutions. A number of institutions providing financial and other services such as guarantees, technical consultancy and so on have come into being on account of the efforts of the RBI. Through these institutions, the RBI has been providing short-term and long-term funds to the agricultural and rural sectors, to small-scale industries, to medium and large industries and to the export sector. It has helped to develop guarantee services in respect of loans to agriculture, small industry, exports and sick units. It also co-ordinates the efforts of banks, financial institutions and government agencies to rehabilitate sick units.

(c) Credit Delivery: The Bank has evolved and put into practice the consortium, co-operative and participatory approach to lending among banks and other financial institutions. By developing the practice of inter-institutional participation, of expertise pooling and of geographical presence, it has helped to upgrade credit delivery and service capability of the financial system. By issuing appropriate guidelines, in 1977, regarding the transfer of loans accounts by borrowers, it has evolved a mutually acceptable system of lending, so that the banking business grows in a healthy manner and without cut-throat competition.

(xi) Regulator of Money and Credit: The function of formulating and conducting monetary policy is of paramount importance for any central bank. Monetary policy refers to the use of techniques of monetary control at the disposal of the central bank for achieving certain objectives.

6.4 MONETARY POLICY OF THE RBI[1]

LO 2
Understand Monetary Policy of the RBI and various techniques of Monetary Control

The objectives of monetary policy in India were (a) to accelerate economic development in an environment of reasonable price stability, (b) to develop appropriate institutional set-up to aid this process, and (c) to help in achieving the financial market stability. By influencing the cost, volume and direction of credit, monetary policy has been encouraging sectoral and overall development, and supporting programmes aimed at social justice. The keynote of monetary policy may be said to be controlled expansion of bank credit and money supply, with special attention to seasonal requirements for credit. The Bank has been directing its attention to ensure that credit expansion takes place in the light of price variations without affecting the output, particularly the industrial output

[1]See also Bhole, L.M., *Impacts of Monetary Policy*, *op. cit*., pp. 5–27 and pp. 263–88.

adversely. In other words, the objective has been one of disinflation without deflation. The containment of inflationary pressures without jeopardising the growth potential has been the main objective of monetary policy, but over the years, the former has assumed an overriding importance. The authorities have come to hold that monetary policy is able to make a more effective contribution to price stability than other objectives. Further, it has come to be believed that by achieving reasonable price stability, it is possible to (a) avoid waste of resources because inflation results in such a waste by increasing uncertainty about the future, (b) create an environment in which efficient decisions are taken and greater employment, poverty alleviation and equitable and balanced growth are achieved. Price stability in this context means not zero rate of increase in prices, but about 4 percent increase per year in them[2]. Bank has not restricted credit for fixed investment and the burden of its restrictive policy fell mainly on inventory investment. In the case of fixed investment, the aim of monetary policy in general and interest rate policy in particular has been to restrain inessential fixed investment and to increase the productivity of investment.

'Promotion of exports' being an independent objective of India's monetary policy, special emphasis has been placed to boost the level of exports. Another distinct objective, since the middle of the 1960s, has been the 'promotion of food procurement operations'. With the passage of time, desired distribution of credit also has assumed great importance and it has come to be clearly defined in terms of the percentage of credit to be disbursed to priority sectors and small borrowers.

Since the middle of the 1980s, monetary policy has an explicitly added concern, namely, to promote efficiency in the operations of the financial system and to effect appropriate structural changes in it. This objective has been given a major, visible and tangible thrust. Towards the end, steps have been initiated to deregulate interest rates, to ease operational constraints in the credit delivery system, to introduce new money market instruments and so on. The monetary policy is now geared towards (a) reducing the rigidities, (b) introducing flexibility, (c) encouraging diversification, (d) promoting more competitive environment, (e) imparting greater discipline and prudence in the operations of the financial system, and (f) maintaining financial stability.

6.4.1 Monetary Policy Framework[3]

At a theoretical level, the evolution of monetary framework could be traced to the desire to reduce inflationary bias in the economy through various refinements under the broader debate on 'rules' versus 'discretion' in policy making, and more recently, 'constrained discretion' which believes that the doctrines of 'rules' and 'discretion' are not mutually exclusive.[4] In practice, the nature of the framework is contingent upon two important considerations: first, the level of development of financial markets and institutions and second, the degree of openness of the economy to trade and capital flows. Monetary authorities in India, unlike monetarists, believe in discretionary monetary policy and have refrained from prescribing any rigid monetary rule or rate of growth of money supply as a target in the course of monetary management. The monetary authorities have not only refrained from fixing any exact monetary rule but they also seem to regard any such

[2]Rangarajan, C., "Issues in Monetary Management", *Indian Economic Association*, Presidential Address, 1988, pp. 5–7.

[3]See also 'Monetary Policy Framework in India: Experience with Multiple-Indicators Approach' Speech by Deepak Mohanty, Executive Director, Reserve Bank of India, delivered at the Conference of the Orissa Economic Association in Baripada, Orissa, on 21 February, 2010.

[4]Bernanke, Ben S. 'Constrained Discretion and Monetary Policy'. Remarks before the Money Marketeers of New York University, New York, February 3, 2003.

rule as harmful, for monetary policy should be responsive to changing circumstances. Hence any precise or detailed monetary targets set for relatively short horizons are likely to become counter-productive, in the sense that they may obscure the need for, or impede the introduction of timely correctives. The monetary authorities have also realized that money supply cannot be the only control variable of monetary policy as it is not exogenous, that is, it is not fully under their control must have led them to adopt the approach as indicated. Thus, the problem of curbing monetary expansion is that, there are two major elements which are virtually outside our control, namely, (a) *the increase in monetary supply corresponding to inward remittances of foreign exchange,* and (b) *the requirement of credit for financing the purchase of food grains.*

In order to achieve the objectives of monetary policy which are not under the direct control of central banks, monetary authorities typically set 'intermediate targets', which bear a stable relationship with the overall objectives of monetary policy. The selection of intermediate target is also conditional upon the channels of monetary transmission—the process through which monetary policy actions impact the ultimate objectives. A number of major central banks in countries such as Switzerland, Germany, Japan, the UK, the United States, France, Australia and Canada adopted monetary targets in the mid-1970s. The consequent weakening of the stable relationship among money, output and prices made many central banks of developed countries to move towards signalling monetary policy stance through setting of interest rates. But during 1980s monetary targeting was adopted in many developing countries such as Brazil, China, Indonesia, Korea, Malaysia, Peru, Philippines, Russia and Venezuela. As financial innovations spread to developing countries and they became more open to external capital flows, monetary targeting proved less effective. The weakening of monetary targeting framework, both in developed and developing countries triggered a search for alternate monetary frameworks. Beginning with New Zealand in 1989, a number of advanced and developing countries moved to 'inflation targeting'. Under this approach, central banks target the final objective, that is, inflation itself rather than targeting any intermediate variable. Among the major central banks, the Bank of England (BoE) formally adopted inflation targeting in 1992.

The RBI regards money supply and the volume of bank credit as the two major intermediate variables, but it seeks to control the former through the latter. There is a belief that money supply does not change on its own, it changes because of certain underlying developments with regard to bank credit, and the expansion of money supply and bank credit are two sides of the same coin. The basic tenet of the Bank's policy has been that variations in the bank credit is the major factor that influences economic activity in India. The volume of borrowings by banks from the RBI is also used as an indicator or target. The bank attempts to reduce bank borrowings from itself and to encourage the liquidation of their earlier obligations in an inflationary period. The level of inventories with the industrial and commercial sector has also come to be actively used as an indicator or target of monetary policy. After the Chakraborty Committee report (1985)[5], the importance of money supply as an intermediate target variable has increased. With empirical evidence supporting reasonable stability in the demand function for money, broad money (M_3) formally emerged as an intermediate target. Under this approach, a monetary projection is made consistent with the expected real GDP growth and a tolerable level of inflation[6]. There are two points to which attention may be drawn in this connection. First, money supply is unlikely to be determined in future primarily by the domestic factors; its control is becoming increasingly difficult because of the extreme difficulties in taming international money flows. Second, the argument that the demand for money function is stable in India is difficult to accept.

[5]RBI, Report of the Committee to Review the Working of the Monetary System, Bombay, 1985.

[6]Technically, in a simple form, if expected real GDP growth is 6 percent, the income elasticity of demand for money is 1.5 and a tolerable level of inflation is 5 percent, the broad money (M_3) expansion target can be set at 14 percent (M_3 growth = $1.5 \times 6 + 5 = 14\%$)

The national and international empirical evidence in this regard is a mixed one. In fact due to international financial integration, velocity of money has tended to increase and has become unstable or unpredictable.

With the pace of trade and financial liberalization gaining momentum following the initiation of structural reforms in the early 1990s, the efficacy of broad money as an intermediate target of monetary policy came under question. Since the mid-1990s, apart from dealing with the usual supply shocks, monetary policy had to increasingly contend with external shocks emanating from swings in capital flows, volatility in the exchange rate and global business cycles. Subsequently, increase in liquidity emanating from capital inflows raised the ratio of net foreign assets (NFA) to reserve money. This rendered the control of monetary aggregates more difficult. Consequently, there was also increasing evidence of changes in the underlying transmission mechanism of monetary policy with interest rate and the exchange rate gaining importance *vis-à-vis* quantity variables[7]. Against this backdrop, the Reserve Bank formally adopted a 'multiple indicators approach' in April, 1998 with a greater emphasis on rate channels for monetary policy formulation. As a part of this approach, information content from a host of quantity variables such as money, credit, output, trade, capital flows and fiscal position as well as from rate variables such as rates of return in different markets, inflation rate and exchange rate are analysed for drawing monetary policy perspectives. Simultaneously, the Reserve Bank also gives the projection for broad money (M_3), which serves as an important information variable, so as to make the resource balance in the economy consistent with the credit needs of the government and the private sector. Thus, the current framework of monetary policy can be termed as an *augmented multiple indicators approach*.

6.5 TECHNIQUES OF MONETARY CONTROL

Many techniques of monetary control—some old and well known, others specially devised and adapted-have been used in India. A few among these are as follows: (a) open market operations (OMO), (b) bank rate, (c) discretionary control of refinance and rediscounting, (d) direct regulation of interest rates on commercial banks' deposits and loans, (e) cash reserve ratio (CRR), (f) statutory liquidity ratio (SLR), (g) direct credit allocation and credit rationing, (h) selective credit controls (SCC), (i) credit authorisation scheme (CAS), (j) fixation of inventory and credit norms, (k) credit planning, (1) moral suasion, and (m) liquidity adjustment facility (LAF).

(a) Open Market Operations (OMOs): OMOs are the market operations conducted by the Reserve Bank of India by way of sale/purchase of Government securities to/from the market with an objective to adjust the rupee liquidity conditions in the market on a durable basis. When the RBI feels there is excess liquidity in the market, it resorts to sale of securities thereby sucking out the rupee liquidity. Similarly, when the liquidity conditions are tight, the RBI will buy securities from the market, thereby, releasing liquidity into the market.

(b) Bank Rate: Bank Rate is the rate at which the central bank allows finance to commercial banks. It is the basic cost of refinance and rediscounting facilities. Section 49 of the RBI Act, 1934 defines it as the standard rate at which the bank is prepared to buy or rediscount bills of exchange or other eligible commercial paper.

(c) Discretionary Control of Refinance: The RBI provides financial accommodation in the form of rediscounting of bills of exchange and promissory notes, and loans and advances to scheduled commercial

[7]Reserve Bank of India (1998), The Working Group on Money Supply: Analytics and Methodology of Compilation (Chairman: Dr. Y.V. Reddy).

and cooperative banks, SFCs, IFC, EXIM Bank and other approved financial institutions for financing *bona fide* internal and external commercial, trade and production transactions.[8] This technique has been discontinued by the RBI.

(d) Direct Regulation of Interest Rates: This technique allows the central bank to directly regulate the deposit and lending rates of commercial banks to control the money supply in different monetary conditions.[9] During the period of liberalization most of the interest rates such as industrial debenture rates, bank lending rates, deposit rates and other interest rates came to be deregulated or market-determined, and therefore, this technique is no more used by the RBI to control money supply.

(e) Cash Reserve Ratio (CRR): The CRR refers to the cash which banks have to maintain with the RBI as a certain percentage of their demand and time liabilities. The authorities earlier used to change this fraction mainly for the purpose of ensuring the safety and liquidity of deposits. Over the years, however, it has become an important and effective tool for directly regulating the lending capacity of banks.

(f) Statutory Liquidity Ratio (SLR). It is the percentage of total deposits, banks have to invest in government bonds and other approved securities. A SLR bond also qualifies for the portfolio maintained by banks to meet the liquidity requirement. It is basically the ratio of liquid assets to demand and time liabilities. There are three objectives behind the use of SLR: (i) to restrict expansion of bank credit, (ii) to augment banks' investment in government securities, and (iii) to ensure solvency of banks. Through variations in the SLR, the Bank is in a position to insulate a part of the government debt from the open market impact because banks are then prevented from disinvesting government securities in favour of commercial credit.

(g) Direct Credit Allocation and Credit: This technique controls the distribution or allocation of credit among different sectors, borrowers and users through the fixation of specific and direct quantitative credit ceilings or credit targets. A variant of this technique which has been very much used is to prescribe average and incremental credit–deposit ratios. The Bank has also directed banks to restrict drawing power of borrowers under cash credit limits. In order to achieve regional or geographical balance in respect of credit disbursal, the RBI has been asking banks to achieve a certain prescribed credit–deposit ratio in respect of their rural and semi-urban branches separately. Normally, they have been asked to achieve a credit–deposit ratio of 60 percent in this context.

(h) Selective Credit Controls (SCC): The seasonal nature of the Indian economy and the nature of inflation, therein, have made SCCs particularly useful in our context. SCCs seek to change the composition of credit; they are used to reduce the supply of credit in certain directions and to encourage it in desired directions. They have been used particularly to prevent speculative hoarding of sensitive commodities such as paddy, rice, wheat, pulses, oil-seeds, oils and vanaspati, cotton sugar, *gur* and so on. They are also applied to unsecured or clean credit by banks, and to credit given for trading in shares. The RBI was using SCCs normally in three forms: (a) fixation of margin requirements, (b) fixation of separate minimum lending rates on credit covered by SCCs and (c) fixation of ceiling on *ex ante* flows of credit.

(i) Credit Authorisation Scheme (CAS): This technique was introduced in November, 1965 with a view to regulate the volume and terms of credit supplied to large borrowers. It had the following objectives: (a) to

[8]For details regarding eligible transactions, parties, purposes, maturity of bills for RBI accommodation, and the duration of accommodation, see RBI, Functions and Working, Bombay, 1983, pp. 58–61.
[9]See also Bhole, L.M., "Administered Interest Rates in India", *Economic and Political Weekly*, June 22–29, 1985.

regulate credit to control inflation, (b) to enforce financial discipline on large borrowers, (c) to ensure that end-use of credit is for genuinely productive purposes, (d) to ensure that large borrowers do not pre-empt or monopolise scarce bank credit, and (e) to ensure that credit is supplied in accordance with the needs of borrowers and the goals of planning. The measure was applicable to commercial banks, cooperative banks, public sector as well as private sector units and short-term as well as long-term loans. As per this scheme, if the fresh working capital limit (inclusive of bill finance) to be sanctioned to any single party by any one bank or the entire banking system exceeded a stipulated level, the bank would require prior authorisation of the RBI for sanctioning such a loan. In the second half of 1988, the RBI decided to withdraw the scheme after a review of its working. In its place, a system of post-sanction scrutiny, namely, credit monitory arrangement (CMA) was introduced. As per this scheme, credit proposals for ₹ five crore and above in the case of working capital, and ₹ two crore and above in the case of term loans, had to be submitted to the RBI for post-sanction scrutiny. If it was found that a particular bank was not enforcing basic credit discipline, the RBI could instruct such a bank to refer the cases of large borrowers to itself for prior authorisation.

(j) Fixation of Inventory and Credit Norms: The RBI has been, through the appointment of various committees, continuously reviewing and studying the working of commercial banks in respect of different functional areas. During the late 1960s and early 1970s, some of these studies had revealed certain striking features of the banking system which needed to be reformed. It was discovered that (i) banks tended to sanction excessive credit limits or overfinance industrial units, (ii) there was gross under-utilisation of credit limits sanctioned, (iii) banks' credit limits tended to exceed their total deposits, (iv) there was an over-reliance on cash credit system while bill finance was not very popular, (v) there was over-accumulation of inventories by industrial units, and (vi) payments period in respect of trade credit of industrial units tended to be long or extended.[10]

The RBI, since the beginning of the 1970s, was issuing important guidelines and instructions to banks in order to remove such drawbacks. The issuing of specific micro-level inventory norms and introduction of new methods of bank lending for purposes of credit appraisal for determining the volume of credit, and for follow-up of bank credit represented a major development in the area of credit management. The banks were required to advance credit for working capital to different industries in the light of inventory norms laid down by the Committee of Direction (COD) and its subcommittees. These committees reviewed and revised these norms from time to time in the cases of different industries, and banks had to implement the new norms as and when they were formulated. These norms and methods had served, to some extent, to reduce the dependence of industrial borrowers on bank finance for meeting their working capital requirements.

(k) Process of Credit Planning: The process of credit planning can be explained briefly. At the bank level, each bank is required to prepare realistic annual credit budget incorporating estimates of volume and growth of deposits and other resources, and of demand for credit. These budgets are submitted to the RBI, and after discussion with banks in May/June every year, they are finalised. The budgets are revised from time to time in the light of changes in credit policy, banking trends and so on. Through continuous monitoring and discussions, the RBI tries to ensure that actual credit operations of banks and their credit plans resemble, so that banks do not have over-extended position of their credit and they do not face liquidity problems.

[10]See National Credit Council, Report of the Study Group on the extent to which credit needs of industry and trade are likely to be inflated and how such trends could be checked, Bombay, 1969; RBI, Report of the Study Group to frame guidelines for follow-up of bank credit, Bombay, 1975; and RBI, Report of the Working Group to review the system of cash credit, Bombay, 1979.

(l) Moral Suasion: This is another most actively and consistently used technique of monetary control. It takes the form of writing letters and holding discussions between the RBI and the banks about trends in the economy in general and in money, credit and finance in particular, and about the measures which ought to be taken from time to time in the light of national objectives. Since the nationalisation of banks, this technique has been used all the more actively and effectively.

(m) Liquidity Adjustment Facility (LAF): LAF is a facility extended by the Reserve Bank of India to the scheduled commercial banks (SCBs) (excluding RRBs) and primary dealers to avail of liquidity in case of requirement or park excess funds with the RBI in case of excess liquidity on an overnight basis against the collateral of government securities including state government securities. Basically LAF enables liquidity management on a day to day basis. The operations of LAF are conducted by way of repurchase agreements (repos and reverse repos) with RBI being the counter-party to all the transactions. The interest rate in LAF is fixed by the RBI from time to time. Repo or ready forward contact is an instrument for borrowing funds by selling securities with an agreement to repurchase the said securities on a mutually agreed future date at an agreed price which includes interest for the funds borrowed. The reverse of the repo transaction is called 'reverse repo' which is lending of funds against buying of securities with an agreement to resell the said securities on a mutually agreed future date at an agreed price which includes interest for the funds lent. It can be seen from the definition that there are two legs to the same transaction in a repo/reverse repo. The duration between the two legs is called the 'repo period'. Predominantly, repos are undertaken on overnight basis, that is, for one day period. Settlement of repo transactions happens along with the outright trades in government securities. The consideration amount in the first leg of the repo transactions is the amount borrowed by the seller of the security. On this, interest at the agreed 'repo rate' is calculated and paid along with the consideration amount of the second leg of the transaction when the borrower buys back the security. The overall effect of the repo transaction would be borrowing of funds backed by the collateral of government securities.[11]

6.6 MONETARY POLICY OPERATIONS IN INDIA

LO 3
Explain Monetary Policy Operations in India

In India, as in most countries, monetary policy framework has evolved in response to and as a consequence of financial developments, openness and shifts in the underlying transmission mechanism. The evolution of monetary policy framework in India can be seen in phases.[12] For analytical convenience, the period since 1935 to date can be divided broadly into five phases, *viz*., (i) formative phase (1935–1950), (ii) development phase-I (1951–1970), (iii) development phase-II (1971–90), (iv) early reform phase (1991–1997), and (v) liquidity adjustment facility phase (1998 onwards).

Formative Phase (1935–1950): During this period, the emphasis was on administering the supply of and demand for credit in the economy. The bank rate, reserve requirements and open market operations were the monetary policy instruments for regulating the credit availability. As the RBI followed a passive interest rate

[11]RBI, 2014, Government Securities Market in India—A Primer

[12]Report of the Working Group on Operating Procedure of Monetary Policy (Chairman: Deepak Mohanty) http://www.rbi.org.in/scripts/BS_PressReleaseDisplay.aspx?prid=24063.

policy, the bank rate was used only once in November 1935 when it was reduced from 3.5 to 3.00 percent (see Table 6.2).

Development Phase-I (1951–1970): During the development phase-I the need to support plan financing through accommodation of government deficit financing by the RBI began to significantly influence the conduct of monetary policy. This led to introduction of several quantitative control measures to contain the consequent inflationary pressures while ensuring credit to preferred sectors. These measures included selective credit control, credit authorisation scheme (CAS) and 'social control' measures to enhance the flow of credit to priority sectors. The bank rate was raised more frequently during this period (see Table 6.2).

Development Phase-II (1971–1990): With the nationalisation of the major commercial banks in July 1969, the conduct of monetary policy began to focus mainly on credit planning, with non-food credit as the policy indicator. Banks were provided funds through standing facilities such as 'general refinance' and 'export refinance' to facilitate developmental financing as per credit plans. Among the policy instruments, the SLR was used for raising resources for the government plan expenditure from banks. The level of SLR was progressively increased from the statutory minimum of 25 percent in February 1970 to 38.5 percent by September 1990 (Table 6.2). The CRR was mainly used to neutralise the inflationary impact of deficit financing and was gradually raised from its statutory minimum of 3 percent in September 1962 to 15 percent by July 1989 (Table 6.2). During this period, the bank rate had a limited role in monetary policy operations, as it was ineffective due to the increasing prescription of differential rates for various sector-specific refinance facilities and the lack of a genuine bill market.

Against this backdrop, it was considered necessary to comprehensively review the functioning of the monetary system and carry out the necessary changes in the institutional set-up and framework of monetary policy. In this context, based on the recommendations of the Chakravarty Committee, a flexible monetary targeting framework with feedback from the real sector and with broad money as the nominal anchor evolved by the mid-1980s. Under this framework, reserve money was the operating target and the CRR was the key operating instrument. However, the efficient functioning of the market continued to remain hindered by a number of other structural rigidities in the system such as the skewed distribution of liquidity and the prevalence of administered deposit and lending rates, besides the persistence of fiscal dominance.

Early Reform Phase (1991–1997): Following the Report of the Committee on Financial System (Chairman: Shri M. Narasimham, 1991)—the process of financial liberalisation implemented in the early 1990s led to a structural shift in the financing paradigm for the government and commercial sectors. Liquidity absorption began to be carried out through reverse repos (then called repos) introduced in 1992. The government market borrowing through auctions since 1992–93 led to development of a secondary market in government securities and the market determination of interest rates. Furthermore, the exchange rate began to have a bearing on monetary management with exchange rate liberalisation—the rupee became fully convertible on the current account in 1994—and the opening up of the economy. By the second half of the 1990s, liquidity management operations by the RBI moved away from direct instruments to indirect instruments. The CRR was brought down from 15 percent of net demand and time liabilities (NDTL) of banks during July 1989–April 1993 to 9.5 percent by November 1997. The SLR was reduced to the statutory minimum of 25 percent by October 1997 (see Table 6.2)

Liquidity Adjustment Facility Phase (1998-2014): The Narasimham Committee on Banking Sector Reforms (1998) had, *inter alia*, suggested that for orderly movement of interest rates in the interbank call

money market, the RBI support to the market should be through liquidity adjustment facility 'under which it would periodically, if not necessarily daily, reset its repo and reverse repo rates which would in a sense provide a reasonable corridor for market play'. Accordingly, the RBI introduced an Interim Liquidity Adjustment Facility (ILAF) in April 1999 to minimise volatility in the money market by ensuring the movement of short-term interest rates within a reasonable range. Under the ILAF, the bank rate acted as the refinance rate (*i.e.* the rate at which the liquidity was to be injected) and liquidity absorption was done through the fixed reverse repo rate announced on a day-to-day basis. An informal corridor of the call rate thus emerged with the bank rate as the ceiling and the reverse repo rate as the floor rate, thereby minimising the volatility in the money market. ILAF was expected to promote stability in money market activities and ensure that interest rates moved within a reasonable range.

The ILAF had the following provisions: (a) With effect from April 21, 1999, the general refinance facility was withdrawn and replaced by a collateralised lending facility (CLF) up to 0.25 percent of the fortnightly average outstanding aggregate deposits in 1997–98 which would be available for 2 weeks at the bank rate. (b) An additional collateralised lending facility (ACLF) for an equivalent amount of CLF would also be available at the bank rate plus 2 percent. (c) CLF and ACLF availed for periods beyond 2 weeks would be subject to a penal rate of 2 percent for an additional period of 2 weeks. (d) The restriction on participation in money market is withdrawn. (e) Scheduled commercial banks became eligible for export credit refinance facility (ERF) at the bank rate with effect from April 1, 1999. (f) Liquidity support against collateral of government securities would be available to primary dealers (PDs) at the bank rate for a period of 90 days (level-I support). Additional liquidity support (level-II support) to PDs for a period not exceeding 2 weeks at a time would be available at the bank rate plus 2 percent. (g) The absorption of liquidity in the market would continue to be through fixed rate repos. (h) The above facilities would be supplemented by OMOs by the RBI. It is important to note that during the phase of ILAF, the standing lending facilities for banks included CLF, ACLF and ECR; and for PDs, it was Level I and Level II liquidity support. Also, the entitlement and the rate at which these facilities were available were different. Therefore, there were multiple standing lending facilities available at multiple rates. These rates were administered in nature which were rationalised subsequently.

Liquidity Concepts

Autonomous Liquidity In order to understand what is LAF, it would be useful to know certain related liquidity concepts. The first such concept is autonomous liquidity (AL). AL comprises central bank balance sheet flows that stem from regular central banking functions as currency authority and banker to the governments and banks. AL essentially comprises liquidity that flows to commercial banks without monetary policy action. AL comprises the autonomous outflows from the RBI netted for liabilities to sectors other than scheduled commercial banks in the banking system.

AL could be defined as the sum of the RBI's net incremental claims on **(i)** the government adjusted for OMOs and repo operations, **(ii)** banks (other than credit to scheduled commercial banks), **(iii)** the commercial sector (other than credit to PDs), and **(iv)** foreign assets net of liabilities (other than scheduled commercial bank deposits with the RBI). AL, in other words, comprises incremental accommodation in the ways and means advances (WMAs), net primary subscription to **(i)** treasury bills, **(ii)** dated securities, and **(iii)** non-marketable securities (such as *ad hoc* TBs funded into non-transferable special securities)

and rupee coins netted for the government deposits with the RBI. The RBI's primary market subscriptions are taken to be a part of AL.

AL is highly influenced by currency. AL is essentially a sum of flows determined by macroeconomic conditions (other than central bank intervention in the money markets).

Discretionary Liquidity Discretionary Liquidity (DL) is the sum of central bank balance sheet flows that arise out of its money market operations. DL represents a change in the total liquidity in the system which occurs due to monetary policy action. It comprises policy-induced flows from the RBI to scheduled commercial banks and primary dealers (PDs). DL is the sum of (a) net repos and OMOs of the RBI, (b) RBI credit to scheduled commercial banks, and (c) RBI credit to primary dealers netted for cumulative changes in reserve requirements.

Net Liquidity Net Liquidity (NL) is the sum of AL and DL; it is simply a change in bank reserves.

The transition from ILAF to a full-fledged LAF began in June, 2000 and was undertaken in three stages. In the first stage, with effect from June 5, 2000, fixed rate reverse repo gave way to variable rate reverse repo auctions. Also, the ACLF to banks and Level II support to PDs were replaced by variable rate repo auctions of same day settlement. As a result, unlike in the ILAF where the rates of interest and amount for refinancing were fixed, in the LAF both were varied to respond to day-to-day liquidity conditions. In the second stage, beginning in May 2001, the CLF and ECR for banks and Level I liquidity support for PDs were divided into two parts of approximately 2:1 ratio, *viz*., a normal facility at the bank rate and a backstop facility at a variable rate at 1 percent above the repo rate, that is, at a market-related rate. Incidentally, as at end-May 2001, the repo rate stood higher at 8.75 percent compared to the bank rate at 7 percent. Some minimum liquidity support to PDs was continued but at an interest rate linked to the variable rate in the daily repo auctions as determined by the RBI from time to time.

Subsequently, the CLF was withdrawn in October, 2002. The apportionment of ECR as normal and backstop facilities was also gradually modified by increasing the proportion of backstop facilities which was financed at variable market-based rates linked to the repo rate. The Reserve Bank introduced a revised LAF scheme on March 29, 2004 based on the recommendations of the internal group on the liquidity adjustment facility. Effective April 5, 2004, daily repo/reverse repo variable rate auctions were replaced by 7-day fixed rate reverse repo auctions and daily fixed rate repo auctions, with a spread of 150 basis points. In order to restore flexibility in liquidity management so as to stabilise inflation expectations, the Reserve Bank replaced 7-day fixed rate and 14-day variable rate reverse repo auctions with overnight fixed rate reverse repo auctions, effective November 1, 2004. The Reserve Bank, however, retains the discretion to conduct overnight/longer-term repo/reverse repo auctions at fixed rate or variable rates depending on market conditions and other relevant factors. Normal facility and backstop facility was merged into a single facility and made available at a single rate. Finally, with the repo rate unified to the bank rate at 6 percent, the entire quantum of ECR and liquidity support to PDs was made available at the repo rate, thereby completely delinking the standing facilities to banks from the bank rate. Thus, the repo rate emerged as the lending rate of the RBI for all practical purposes. As a result, the importance of the bank rate as a monetary policy instrument waned.

The third stage of full-fledged LAF had begun with the full computerisation of public debt office (PDO) and introduction of RTGS marked a big step forward in this phase. Repo operations today are mainly through electronic transfers. The possibility of operating LAF at different times of the same day is now close to getting materialised. In that sense, we have very nearly completed the transition to operating a full-fledged LAF. In the year 2005–2006, the economy witnessed strong and sustained credit demand, lower accretion of

forex reserves, build-up of the centre's cash balances with the RBI and the redemption of India Millennium Deposits (IMDs). All these led to the injection of liquidity by the RBI. During this time, in order to fine-tune the management of day-to-day liquidity and in response to suggestions from market participants, the Second LAF (SLAF) was introduced on a daily basis in November, 2005. SLAF is now used periodically, depending on liquidity conditions, rather than as a regular facility.

In a nutsell, the LAF operates through repo auctions, that is, the sale of government securities from the RBI portfolio for absorption of liquidity and reverse repo auctions, that is, buying of government securities for injection of liquidity on a daily basis, thereby creating a corridor for the call money rates and other short-term interest rates. The funds under LAF are expected to be used by the banks for their day-to-day mismatches in liquidity. However, this procedure had two major drawbacks. First was the lack of a single policy rate. Consequently, the operating policy rate alternated between repo and reverse repo rates depending upon the prevailing liquidity condition. In a surplus liquidity condition, the reverse repo rate becomes the operating policy rate. In a deficit liquidity situation, the repo rate becomes the policy rate. Second was the lack of a firm corridor which often led the implicit target rate (call rate) breaching the upper and lower limits under liquidity stress conditions. Recognising these shortcomings, a new operating procedure was put in place in May, 2011.

The new operating procedure retained the essential features of the earlier LAF framework with the following key modifications. First, the weighted average overnight call money rate was explicitly recognised as the operating target of monetary policy. Second, the repo rate was made the only one independently varying policy rate. Third, a new marginal standing facility (MSF) was instituted under which scheduled commercial banks (SCBs) could borrow overnight at their discretion up to 1 percent of their respective net demand and time liabilities (NDTL) at 100 basis points above the repo rate. Fourth, the revised corridor was defined with a fixed width of 200 basis points. The repo rate was placed in the middle of the corridor, with the reverse repo rate 100 basis points below it and the MSF rate 100 basis points above it. Since April, 2016 the Policy Corridor has been further revised. Currently the revised corridor is defined with a width of 100 basis point. Now the reverse repo rate is 50 basis point below and the marginal standing facility rate is 50 basis point above the repo rate. The current operating framework is illustrated in Figure 6.1.

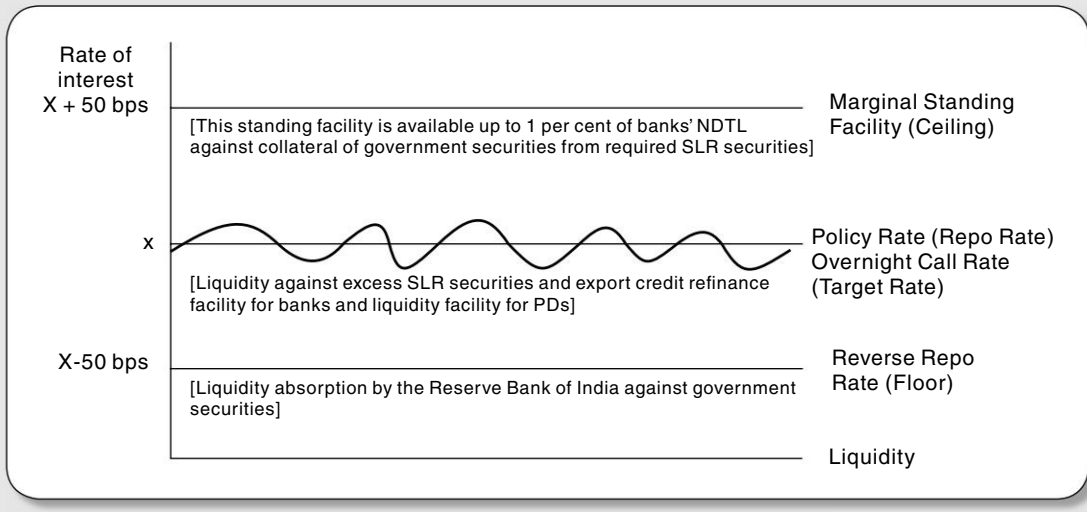

Figure 6.1 **Current liquidity adjustment facility framework in India.**

The new operating procedure is expected to improve the implementation and transmission of monetary policy because of the following reasons. First, explicit announcement of an operating target makes market participants clear about the desired policy impact. Second, a single policy rate removes the confusion arising out of policy rate alternating between the repo and the reverse repo rates. It also improves the accuracy of signalling monetary policy stance. Third, the institution of MSF provides a safety valve against unanticipated liquidity shocks. Fourth, a fixed interest rate corridor set by MSF rate and reverse repo rate, by reducing uncertainty and avoiding communication difficulties associated with a variable corridor, will help keep the overnight average call money rate close to the repo rate.

6.6.1 Merits of LAF

The LAF is said to have many merits and it serves a number of objectives both of which have been stated in different ways as follows: LAF is a new short-term liquidity management technique. It is a flexible instrument in the hands of RBI to modulate, even out or to adjust or to manage short-term market liquidity fluctuations on a daily basis and to help create stable or orderly conditions in the overnight/call money market. It is meant to help monetary authorities to transmit the short-term interest rate signals to other money markets, financial markets and the long end of the yield curve. The repo operations also provide liquidity and breadth to the underlying treasury securities markets. They help the banking system also by providing it with an outlet for short-term liquidity, and thereby to optimise the return on short-term surplus funds. The LAF operations combined with OMOs and bank rate changes have become the major technique (operating procedure) of monetary policy in India.

Table 6.1 Open market operation of RBI, 1951–2016

(*Amount in ₹ crore*)

Year	*Purchases*	*Sales*	*Net sales(–)/net purchase(+)*	*Total operation*
	(1)	*(2)*	*(3)*	*(4)*
1951–52	61	55	+6	116
1955–56	22	38	–16	60
1959–60	23	84	–61	107
1970–71	207	313	–106	520
1975–76	680	1187	–507	1867
1980–81	454	796	–342	1250
1985–86	882	2613	–1731	3495
1990–1991	2291	2238	+53	4529
1995–1996	1645	1131	+514	2776
2000–2001	4471	23795	–19324	28266
2005–2006	740	4653	–3913	5393
2006–2007	720	5845	–5125	6565
2007–2008	13510	7587	+5923	21097
2008–2009	104480	9932	+34548	114412
2009–2010	85399	9931	+75468	95330
2010–2011	78799	11575	+67224	90374
2011–2012	142272	8187	+134086	150459
2012–2013	166095	11548	+154547	177643
2013–2014	71633	19343	+52290	90976
2014–2015	22744	86761	–64017	109505
2015–2016	94554	42284	+52270	136838

Source: RBI, RCF, various issues and RBI, Handbook of Statistics, various issues.

Table 6.2 Major monetary policy rates and reserve requirements

(*Percentage*)

Effective dates	*Bank rate*	*Repo*	*Reverse repo rate*	*Cash reserve ratio*	*Marginal standing facility*	*Statutory liquidity ratio*
15-04-2016	6.75	6.25	5.75	4.00	6.75	20.5
15-07-2013	10.25	—	—	—	10.25	—
3-05-2013	8.25	7.25	6.25	—	8.25	—
19-03-2013	8.50	7.50	6.50	—	8.50	—
9-02-2013	—	—	—	4.00	—	—
29-01-2013	8.75	7.75	6.75	—	8.75	—
3-11-2012	—	—	—	4.25	—	—
22-09-2012	—	—	—	4.50	—	—
11-08-2012	—	—	—	—	—	23.00
17-04-2012	9.00	8.00	7.00	—	9.00	—
10-03-2012	—	—	—	4.75	—	—
13-02-2012	9.50	—	—	—	—	—
28-01-2012	—	—	—	5.50	—	—
25-10-2011	—	8.50	7.50	—	9.50	—
16-09-2011	—	8.25	7.25	—	9.25	—
26-07-2011	—	8.00	7.00	—	9.00	—
16-06-2011	—	7.50	6.50	—	8.50	—
3-05-2011	—	7.25	6.25	—	8.25	—
17-03-2011	—	6.75	5.75	—	—	—
25-01-2011	—	6.50	5.50	—	—	—
18-12-2010	—	—	—	—	—	24.00
2-11-2010	—	6.25	5.25	—	—	—
16-09-2010	—	6.00	5.00	—	—	—
27-07-2010	—	5.75	4.50	—	—	—
2-07-2010	—	5.50	4.00	—	—	—
24-04-2010	—	—	—	6.00	—	—
20-04-2010	—	5.25	3.75	—	—	—
19-03-2010	—	5.00	3.50	—	—	—
27-02-2010	—	—	—	5.75	—	—
13-02-2010	—	—	—	5.50	—	—
7-11-2009	—	—	—	—	—	25.00
21-04-2009	—	4.75	3.25	—	—	—
5-03-2009	—	5.00	3.50	—	—	—
17-01-2009	—	—	—	5.00	—	—
5-01-2009	—	5.50	4.00	—	—	—

(*Contd.*)

8-12-2008	—	6.50	5.00	—	—	—
8-11-2008	—	—	—	5.50	—	24.00
3-11-2008	—	7.50	—	—	—	—
25-10-2008	—	—	—	6.00	—	—
20-10-2008	—	8.00	—	—	—	—
11-10-2008	—	—	—	6.50	—	—
30-08-2008	—	—	—	9.00	—	—
30-07-2008	—	9.00	—	—	—	—
19-07-2008	—	—	—	8.75	—	—
5-07-2008	—	—	—	8.50	—	—
25-06-2008	—	8.50	—	—	—	—
12-06-2008	—	8.00	—	—	—	—
24-05-2008	—	—	—	8.25	—	—
10-05-2008	—	—	—	8.00	—	—
26-04-2008	—	—	—	7.75	—	—
10-11-2007	—	—	—	7.50	—	—
4-08-2007	—	—	—	7.00	—	—
28-04-2007	—	—	—	6.50	—	—
14-04-2007	—	—	—	6.25	—	—
31-03-2007	—	7.75	—	—	—	—
3-03-2007	—	—	—	6.00	—	—
17-02-2007	—	—	—	5.75	—	—
31-01-2007	—	7.50	—	—	—	—
6-01-2007	—	—	—	5.50	—	—
23-12-2006	—	—	—	5.25	—	—
31-10-2006	—	7.25	—	—	—	—
25-07-2006	—	7.00	6.00	—	—	—
8-06-2006	—	6.75	5.75	—	—	—
24-01-2006	—	6.50	5.50	—	—	—
26-10-2005	—	6.25	5.25	—	—	—
29-04-2005	—	—	5.00	—	—	—
27-10-2004	—	—	4.75	—	—	—
2-10-2004	—	—	—	5.00	—	—
18-09-2004	—	—	—	4.75	—	—
14-06-2004	—	—	—	—	—	—
31-03-2004	—	6.00	—	—	—	—
25-08-2003	—	—	4.50	—	—	—
14-06-2003	—	—	—	4.50	—	—
29-04-2003	6.00	—	—	—	—	—

(*Contd.*)

19-03-2003	—	7.00	—	—	—	—
7-03-2003	—	7.10	—	—	—	—
3-03-2003	—	—	5.00	—	—	—
16-11-2002	—	—	—	4.75	—	—
12-11-2002	—	7.50	—	—	—	—
29-10-2002	6.25	—	5.50	—	—	—
27-06-2002	—	—	5.75	—	—	—
15-06-2002	—	—	—	5.00	—	—
28-03-2002	—	8.00	—	—	—	—
5-03-2002	—	—	6.00	—	—	—
29-12-2001	—	—	—	5.50	—	—
3-11-2001	—	—	—	5.75	—	—
23-10-2001	6.50	—	—	—	—	—
7-06-2001	—	8.50	—	—	—	—
28-05-2001	—	—	6.50	—	—	—
19-05-2001	—	—	—	7.50	—	—
30-04-2001	—	8.75	—	—	—	—
27-04-2001	—	9.00	6.75	—	—	—
10-03-2001	—	—	—	8.00	—	—
2-03-2001	7.00	—	—	—	—	—
24-02-2001	—	—	—	8.25	—	—
17-02-2001	7.50	—	—	—	—	—
12-08-2000	—	—	—	8.50	—	—
29-07-2000	—	—	—	8.25	—	—
22-07-2000	8.00	—	—	—	—	—
22-04-2000	—	—	—	8.00	—	—
8-04-2000	—	—	—	8.50	—	—
2-04-2000	7.00	—	—	—	—	—
20-11-1999	—	—	—	9.00	—	—
6-11-1999	—	—	—	9.50	—	—
8-05-1999	—	—	—	10.00	—	—
13-03-1999	—	—	—	10.50	—	—
2-03-1999	8.00	—	—	—	—	—
29-08-1998	—	—	—	11.00	—	—
29-04-1998	9.00	—	—	—	—	—
11-04-1998	—	—	—	10.00	—	—
3-04-1998	10.00	—	—	—	—	—
28-03-1998	—	—	—	10.25	—	—
19-03-1998	10.50	—	—	—	—	—

(*Contd.*)

17-01-1998	11.00	—	—	10.50	—	—
6-12-1997	—	—	—	10.00	—	—
22-11-1997	—	—	—	9.50	—	—
25-10-1997	—	—	—	9.75	—	25.00
22-10-1997	9.00	—	—	—	—	—
26-06-1997	10.00	—	—	—	—	—
16-04-1997	11.00	—	—	—	—	—
18-01-1997	—	—	—	10.00	—	—
4-01-1997	—	—	—	10.50	—	—
9-11-1996	—	—	—	11.00	—	—
26-10-1996	—	—	—	11.50	—	—
6-07-1996	—	—	—	12.00	—	—
11-05-1996	—	—	—	13.00	—	—
27-04-1996	—	—	—	13.50	—	—
9-12-1995	—	—	—	14.00	—	—
11-11-1995	—	—	—	14.50	—	—
29-10-1994	—	—	—	—	—	31.50
17-09-1994	—	—	—	—	—	33.75
20-08-1994	—	—	—	—	—	34.25
6-08-1994	—	—	—	15.00	—	—
9-07-1994	—	—	—	14.75	—	—
11-06-1994	—	—	—	14.50	—	—
16-10-1993	—	—	—	—	—	34.75
18-09-1993	—	—	—	—	—	37.25
21-08-1993	—	—	—	—	—	37.50
15-05-1993	—	—	—	14.00	—	—
17-04-1993	—	—	—	14.50	—	—
6-03-1993	—	—	—	—	—	37.75
6-02-1993	—	—	—	—	—	38.00
9-01-1993	—	—	—	—	—	38.25
9-10-1991	12.00	—	—	—	—	—
4-07-1991	11.00	—	—	—	—	—
22-09-1990	—	—	—	—	—	38.50
1-07-1989	—	—	—	15.00	—	—
30-07-1988	—	—	—	11.00	—	—
2-07-1988	—	—	—	10.50	—	—
2-01-1988	—	—	—	—	—	38.00
24-10-1987	—	—	—	10.00	—	—
25-04-1987	—	—	—	—	—	37.50
28-02-1987	—	—	—	9.50	—	—

(*Contd.*)

6-07-1985	—	—	—	—	—	37.00
8-06-1985	—	—	—	—	—	36.50
1-09-1984	—	—	—	—	—	36.00
28-07-1984	—	—	—	—	—	35.50
4-02-1984	—	—	—	9.00	—	—
27-08-1983	—	—	—	8.50	—	—
29-07-1983	—	—	—	8.00	—	—
27-05-1983	—	—	—	7.50	—	—
11-06-1982	—	—	—	7.00	—	—
9-04-1982	—	—	—	7.25	—	—
29-01-1982	—	—	—	7.75	—	—
25-12-1981	—	—	—	7.50	—	—
27-11-1981	—	—	—	7.25	—	—
30-10-1981	—	—	—	—	—	35.00
25-09-1981	—	—	—	—	—	34.50
21-08-1981	—	—	—	7.00	—	—
31-07-1981	—	—	—	6.50	—	—
12-07-1981	10.00	—	—	—	—	—
1-12-1978	—	—	—	—	—	34.00
13-11-1976	—	—	—	6.00	—	—
4-09-1976	—	—	—	5.00	—	—
28-12-1974	—	—	—	4.00	—	—
14-12-1974	—	—	—	4.50	—	—
23-07-1974	9.00	—	—	—	—	—
1-07-1974	—	—	—	5.00	—	33.00
8-12-1973	—	—	—	—	—	32.00
22-09-1973	—	—	—	7.00	—	—
8-09-1973	—	—	—	6.00	—	—
29-06-1973	—	—	—	5.00	—	—
31-05-1973	7.00	—	—	—	—	—
17-11-1972	—	—	—	—	—	30.00
4-08-1972	—	—	—	—	—	29.00
9-01-1971	6.00	—	—	—	—	—
28-08-1970	—	—	—	—	—	28.00
24-04-1970	—	—	—	—	—	27.00
5-02-1970	—	—	—	—	—	26.00
2-03-1968	5.00	—	—	—	—	—
17-02-1965	6.00	—	—	—	—	—
26-09-1964	5.00	—	—	—	—	—

(*Contd.*)

16-09-1964	—	—	—	—	—	25.00
3-01-1963	4.50	—	—	—	—	—
16-09-1962	—	—	—	3.00 % of NDTL	—	—
11-11-1960	—	—	—	(a) 5% of DL, (b) 2% of TL	—	—
6-05-1960	—	—	—	(a) 5% of DL, (b) 2% of TL	—	—
6-03-1960	—	—	—	(a) 5% of DL, (b) 2% of TL	—	—
16-05-1957	4.00	—	—	—	—	—
15-11-1951	3.50	—	—	—	—	—
16-03-1949	—	—	—	—	—	20.00
28-11-1935	3.00	—	—	—	—	—
5-07-1935	3.50	—	—	(a) 5% of DL, (b) 2% of TL	—	—

Source: RBI, various publications.

It must be stated at this juncture that the relevance and the extent of use of techniques such as direct credit allocation or credit rationing, credit authorisation scheme, fixation of inventory and credit norms and credit planning have diminished after the introduction of the policy of liberalisation and deregulation in 1991 (Tables 6.1, 6.2 and 6.3). In the new system which emphasises competition among banks and financial institutions, and the shift from the direct to indirect techniques, the authorities are also giving less emphasis on their relevance. From this point of view, the efforts to make OMOs and LAF effective are quite welcome. However, the theoretical and the Indian-situation-specific limitations of the OMOs cannot be underplayed. More importantly, the stance of the RBI on the CRR technique is not convincing at all. In 1991–1993 itself, it had committed itself to reducing the CRR to 10 percent level by 1995–1996. After using it actively for more than 20 years, it now thinks that the CRR has many drawbacks. We have examined this stance theoretically and empirically earlier and have shown that it may be neither desirable nor possible to discard or deactivate the CRR technique in Indian conditions.[13]

Table 6.3 Summary of changes in techniques of monetary control in India, 1935–2013

	1935–1950	*1951–1970*	*1971–1990*	*1991–1997*	*1998–2016*
1. Bank rate	✓	✓	—	—	✓
(a) No. of times used	2	6	4	5	15
(b) Range of variation (%)	3–3.5	3.5–6.0	6.0–11.0	9.0–12.0	6.0–11.0
2. CRR	—	—	✓	✓	✓
(a) No. of times used	—	—	24	17	51
(b) Range of variation (%)	—	—	4.0–15.0	9.5–15.0	4.0–11.0

(*Contd.*)

[13]Bhole, L.M., 'Recent Changes in the Theory and Policy of Cash Reserve Ratio and Statutory Liquidity Ratio: A Critical Appraisal', *Vikalpa*, October–December 1993.

3. Standing refinance facility	✓	✓	✓	—	—
4. Direct credit controls	✓	✓	✓	—	—
5. OMOs	✓	✓	—	—	—
6. Repo operation and repo rate	—	—	—	—	✓
(a) No. of times repo rate used	—	—	—	—	45
(b) Range of variation in RR (%)	—	—	—	—	4.75–9.00
(c) No. of times reverse repo rate used	—	—	—	—	34
(d) Range of variation in RRR (%)	—	—	—	—	3.25–7.50
7. Liquidity adjustment facility	—	—	—	—	✓

Notes:
✓ Denotes the active use of the instrument.
— Denotes absence of the use of the instrument.
*The **range** specifies lowest rate–highest rate within the given period.*

Source: RBI, RCF and annual reports.

6.7 MARKET STABILISATION SCHEME (MSS)

LO 4

Discuss Market Stabilisation Scheme (MSS) and challenges to Monetary Policy in India

The money markets operated in liquidity surplus mode since 2002 due to large capital inflows and current account surplus. The initial burden of sterilisation was borne by the outright transaction of dated securities and T-bills. However, due to the depletion in stock of government securities, the burden of liquidity adjustment shifted on LAF, which is essentially a tool of adjusting for marginal liquidity. Keeping in view the objective of absorbing the liquidity of enduring nature using instruments other than LAF, the Reserve Bank appointed a working group on instruments of sterilisation (Chairperson: Smt. Usha Thorat). The group recommended issue of T-bills and dated securities under market stabilisation scheme (MSS) where the proceeds of MSS were to be held by the government in a separate identifiable cash account maintained and operated by RBI. The amounts credited into the MSS account would be appropriated only for the purpose of redemption and/or buy back of the treasury bills and/or dated securities issued under the MSS. In pursuance of the recommendation, the Government of India and RBI signed a memorandum of understanding (MoU) on March 25, 2004. As part of the MoU, the scheme was made operational since April, 2004. It was agreed that the government would issue Treasury Bills and/or dated securities under the MSS in addition to the normal borrowing requirements, for absorbing liquidity from the system. These securities would be issued by way of auctions by the Reserve Bank and the instruments would have all the attributes of existing T-bills and dated securities. They were to be serviced like any other marketable government securities. MSS securities are being treated as eligible securities for statutory liquidity ratio (SLR), repo and liquidity adjustment facility (LAF).

The payments for interest and discount on MSS securities are not made from the MSS account. The receipts due to premium and/or accrued interest are also not credited to the MSS Account. Such receipts and payments towards interest, premium and discount are shown in the budget and other related documents as distinct components under separate subheads. The T-bills and dated securities issued for the purpose of the MSS are matched by an equivalent cash balance held by the government with the Reserve Bank. Thus, they only have a marginal impact on revenue and fiscal balances of the government to the extent of interest payment on the

outstanding under the MSS. For mopping up enduring surplus liquidity, policy choices exist between central bank issuing its own securities or government issuing additional securities. A large number of countries, such as, Chile, China, Colombia, Indonesia, Korea, Malaysia, Peru, Philippines, Russia, Sri Lanka, Taiwan and Thailand have issued central bank securities. However, central banks of many of these countries faced deterioration in their balance sheets. As such, there are merits in issuing sterilisation bonds on government account. This is more so, in case of an already well-established government debt market, where issuing of new central bank bills of overlapping maturity could cause considerable confusion and possible market segmentation which could obfuscate the yield curve, reduce liquidity of the instruments and make operations that much more difficult. MSS has considerably strengthened the Reserve Bank's ability to conduct exchange rate and monetary management operations. It has allowed absorption of surplus liquidity by instruments of short term (91-day, 182-day and 364-day T-bills) and the medium-term (dated government securities) maturity. Generally, the preference has been for the short-term instruments.

6.8 CHALLENGES TO MONETARY POLICY IN INDIA

- The growing importance of assets and asset prices in a globally integrated economy complicates the conduct of monetary policy when it is focused on and equipped to address price stability issues.
- With the growing integration of financial markets domestically and internationally, there is greater activism in liquidity management with special focus on short-end of the market spectrum. As liquidity management acquires overriding importance, the evolving solvency conditions of financial intermediaries may get obscured in the short-run.
- There is considerable difficulty faced by monetary authorities in detecting and measuring inflation, especially inflation expectations. Recent experience with regard to impact, if increases in oil prices show that ignoring the structural or permanent elements of shocks may slow down appropriate monetary policy response, especially if the focus is on 'core inflation'.
- Reserve Bank faces the dilemma of grappling with the inherently volatile increasing capital flows relative to domestic absorptive capacity.
- In the emerging scenario of large and uncertain capital flows, the choice of the instruments for sterilisation and other policy responses have been constrained.
- In the liberalisation process, aligning the operations of large financial conglomerates and foreign institutions with local public policy priorities remains a challenge for domestic financial regulators.
- Dominance of all big financial intermediaries increases the concentration risk.

6.9 REPORT OF THE EXPERT COMMITTEE TO REVISE AND STRENGTHEN THE MONETARY POLICY FRAMEWORK IN INDIA[14]

LO 5

Review the report of the expert committee to revise and strengthen the Monetary Policy Framework in India

Keeping these above-mentioned challenges on September 12, 2013 the RBI Governor has appointed an expert committee (Chairman: Urjit Patel, Deputy Governer, RBI) to revise and strengthen the monetary policy framework in India. The terms of reference of the Committee were (1) to review the objectives and conduct of monetary policy in a globalised and highly inter-connected

[14]Report of the Expert Committee to Revise and Strengthen the Monetary Policy Framework in India (Chairman: Urjit Patel, Deputy Governor, RBI), January, 2014.

environment, (2) to recommend an appropriate nominal anchor for the conduct of monetary policy, (3) to review the organisational structure, operating framework and instruments of monetary policy, particularly the multiple indicator approach and the liquidity management framework, with a view to ensuring compatibility with macroeconomic and financial stability, as well as market development, (4) to identify regulatory, fiscal and other impediments to monetary policy transmission, and recommend measures and institutional pre-conditions to improve transmission across financial market segments and to the broader economy, and (5) to carefully consider the recommendations of previous committees/groups in respect of all of the above. The committee has submitted its report on January, 2014 and has given following major recommendations:

1. Inflation should be the nominal anchor for the monetary policy framework. This nominal anchor should be set by the Reserve Bank as its predominant objective of monetary policy in its policy statements. The nominal anchor should be communicated without ambiguity, so as to ensure a monetary policy regime shift away from the current approach to one that is centred around the nominal anchor. Subject to the establishment and achievement of the nominal anchor, monetary policy conduct should be consistent with a sustainable growth trajectory and financial stability.
2. The RBI should adopt the new CPI (combined) as the measure of the nominal anchor for policy communication. The introduction of new CPIs in 2011, that is, all India CPI combined, CPI-rural and CPI-urban provides for the first time a nationwide retail price index in India that captures the inflation faced by households, that is, cost of living inflation. The new CPIs have a comprehensive coverage across regions as well as commodity groups including services. With a base year of 2010, the new CPIs have a weighting pattern that reflects more recent consumption patterns as compared with the other CPIs, as it is based on NSSO's 61st Round of Consumer Expenditure Survey data (2004–2005). The nominal anchor should be defined in terms of headline CPI inflation, which closely reflects the cost of living and influences inflation expectations relative to other available metrics.
3. The nominal anchor or the target for inflation should be set at 4 percent with a band of +/– 2 percent around it (a) in view of the vulnerability of the Indian economy to supply/external shocks and the relatively large weight of food in the CPI, and (b) the need to avoid a deflation bias in the conduct of monetary policy. This target should be set in the frame of a 2-year horizon that is consistent with the need to balance the output costs of disinflation against the speed of entrenchment of credibility in policy commitment.
4. Consistent with the Fiscal Responsibility and Budget Management (FRBM) (Amendment) Rules, 2013, the Central Government needs to ensure that its fiscal deficit as a ratio to GDP is brought down to 3.0 percent by 2016–2017.
5. Monetary policy decision-making should be vested in a monetary policy committee (MPC). The governor of the RBI will be the chairman of the MPC, the deputy governor in charge of monetary policy will be the vice chairman and the executive director in charge of monetary policy will be a member. Two other members will be external, to be decided by the chairman and vice chairman on the basis of demonstrated expertise and experience in monetary economics, macroeconomics, central banking, financial markets, public finance and related areas.
6. As an overarching prerequisite, the operating framework has to subserve stance and objectives of monetary policy. Accordingly, it must be redesigned around the central premise of a policy rule. While several variants are available in the literature and in country practice, the committee is of the view that a simple rule defined in terms of a real policy rate (that is easily communicated and understood), is

suitable to Indian conditions and is consistent with the nominal anchor recommended. When inflation is above the nominal anchor, the real policy rate is expected, on average, to be positive. The MPC could decide the extent to which it is positive, with due consideration to the state of the output gap (actual output growth relative to trend/potential) and to financial stability.

7. A phased refinement of the operating framework is necessary to make it consistent with the conduct of monetary policy geared towards the establishment and achievement of the nominal anchor. In the first or transitional phase, the weighted average call rate will remain the operating target, and the overnight LAF repo rate will continue as the single policy rate. The reverse repo rate and the MSF rate will be calibrated off the repo rate with a spread of (+/–) 100 basis points, setting the corridor around the repo rate. The repo rate will be decided by the MPC through voting. The MPC may change the spread, which however should be as infrequent as possible to avoid policy-induced uncertainty for markets.
8. Provision of liquidity by the RBI at the overnight repo rate will, however, be restricted to a specified ratio of bank-wise net demand and time liabilities (NDTL), that is consistent with the objective of price stability. As the 14-day term repo rate stabilises, central bank liquidity should be increasingly provided at the 14-day term repo rate and through the introduction of 28, 56 and 84-day variable rate auctioned term repos by further calibrating the availability of liquidity at the overnight repo rate as necessary.
9. Consistent with the repo rate set by the MPC, the RBI will manage liquidity and meet the demand for liquidity of the banking system using a mix of term repos, overnight repos, outright operations and the MSF.
10. In the second phase as term repos for managing liquidity in the transition phase gain acceptance, the 'policy rate' voted on by the MPC will be a target rate for the short end of the money market, to be achieved through active liquidity management. The 14-day term repo rate is superior to the overnight policy rate since it allows market participants to hold central bank liquidity for a relatively longer period, thereby enabling them to lend repo term money in the inter-bank market and develop market segments and yields for term transactions. More importantly, term repos can wean away market participants from the passive dependence on the RBI for cash/treasury management. Overnight repos under the LAF have effectively converted the discretionary liquidity facility into a standing facility that could be accessed as the first resort, and precludes the development of markets that price and hedge risk. Improved transmission of monetary policy thus becomes the prime objective for setting the 14-day term repo rate as the operating target.
11. Based on its assessment of liquidity, the RBI will announce the quantity of liquidity to be supplied through variable rate auctions for the 14-day term repos alongside relatively fixed amounts of liquidity provided through longer-term repos. The RBI will aim at keeping 14-day term repo auction cut-off rates at or close to the target policy rate by supplementing its main policy operation (14-day term repos) with (i) two-way outright open market operations through both auctions and trading on the NDS-OM platform; (ii) fine tuning operations involving overnight repos/reverse repos (with a fine spread between the repo and reverse repo rate); and (iii) discretionary changes in the CRR that calibrate bank reserves to shifts in the policy stance. The MSF rate should be set in a manner that makes it a truly penal rate to be accessed only under exceptional circumstances.
12. To support the operating framework, the Committee recommends that some new instruments be added to the toolkit of monetary policy. First, to provide a floor for the new operating framework for absorption

of surplus liquidity from the system but without the need for providing collateral in exchange, a (low) remunerated standing deposit facility may be introduced, with the discretion to set the interest rate without reference to the policy target rate. Second, term repos of longer tenor may also be conducted since term repo market segments could help in establishing market-based benchmarks for a variety of money market instruments and shorter term deposits/loans. Third, dependence on market stabilisation scheme (MSS) and cash management bills (CMBs) may be phased out, consistent with government debt and cash management being taken over by the government's debt management office (DMO). Fourth, all sector-specific refinance should be phased out.

13. Consistent with the time path of fiscal consolidation mentioned, SLR should be reduced to a level in consonance with the requirements of liquidity coverage ratio (LCR) prescribed under the Basel III framework.
14. OMOs have to be detached from fiscal operations and instead linked solely to liquidity management. OMOs should not be used for managing yields on government securities.
15. With regard to inflows that are excessive in relation to external financing requirements and the need for sterilized intervention: (a) the RBI should build a sterilization reserve out of its existing and evolving portfolio of GOI securities across the range of maturities, but accentuated towards a 'strike capability' to rapidly intervene at the short end; and (b) the RBI should introduce a remunerated standing deposit facility, which will effectively empower it with unlimited sterilisation capability.

Inflation Targeting

In the recent years, India has experienced a high level of inflation among all G-20 countries. Due to the elevated inflation, the real effective interest rate remains negative causing reduction in the domestic financial saving. Also, the external competitiveness gets affected due to such persistent high inflation in comparison to other trading partners. In this conjecture, it has become a challenge for the policy makers to take suitable policy measures to control inflation and stabilise macroeconomic environment. In view of these lines, India adopted flexible inflation targeting as the monetary policy framework on the recommendation of Urjit Patel Committee (2014). The primary focus of flexible inflation targeting (FIT) is to achieve a particular level of inflation on average over the business cycle, while accommodating growth concerns in the short run (I to, 2013). Though FIT recognises the existence of the growth-inflation trade-off in the short run, it is designed around the critical importance of price stability for sustainable growth in the medium run. The argument for price stability stems from the fact that rising prices create uncertainties in decision making, adversely affecting savings and encouraging speculative investments. Inflation targeting brings in more predictability and transparency in deciding monetary policy. If the central banks could ensure price stability, households and companies can plan ahead, negotiating wages on the basis of expecting low and stable inflation. The primary architecture of FIT in India is as follows:

1. **The Monetary Policy Committee (MPC):** The MPC is empowered and responsible to set up the benchmark policy rate (repo rate) in such a way to keep the inflation within the specified target level. Under the RBI Act, the Central Government, in consultation with the RBI, determines the inflation target in terms of the Consumer Price Index (CPI), once in every 5 years. This target would be notified in the Official Gazette.

2. **Determination and Notification of Inflation Target:** The Central Government of India has fixed the inflation target for the period beginning from August 5, 2016 and ending on the March 31, 2021, as under:
   - Inflation target: 4 percent.
   - Upper tolerance level: 6 percent.
   - Lower tolerance level: 2 percent.

   'The key advantage of a range around a target is that it allows MPC to recognise the short-run trade-offs between inflation and growth but enables it to pursue the inflation target in the long run over the course of the business cycle'.
3. **What is the condition for a failed monetary policy with respect to the set target?**
   As per the policy, if inflation goes above 6 percent or goes below 2 percent for three consecutive quarters, then it will be treated as the failure of the RBI's monetary policy. In such a scenario, the RBI will initiate counteractive measures to meet the required target.
4. **What the RBI has to do if the inflation target is not met?**
   The new notification also prescribes the procedure to be followed by the RBI if the target is missed. 'Where RBI fails to meet the inflation target, it shall set out a report to the Central Government stating the reasons for failure to achieve the inflation target; remedial actions proposed to be taken by RBI; and an estimate of the time-period within which the inflation target shall be achieved pursuant to timely implementation of proposed remedial actions'.

6.10 MONETARY POLICY IN OTHER COUNTRIES

LO 6
Compare the monetary policy operations of some developed and developing countries

Tables 6.4 and 6.5 show the monetary policy operations of some developed and developing countries. The period since the 1990s has witnessed some convergence in the conduct of monetary policy, worldwide. The objectives, targets and operating procedures of monetary policy worldwide have witnessed considerable shifts in tune with the evolution of monetary theory, central banking regimes and the changing macroeconomic conditions over time. By the 1970s, most central banks had accepted price stability as a key objective of monetary policy. In recent years, beyond the traditional growth-inflation trade-off, financial stability has emerged as another key objective in the wake of growing financial market integration and associated uncertainty and volatility arising out of contagion. Although a number of central banks in developed countries such as the Reserve Bank of New Zealand, Reserve Bank of Australia and the Bank of England have adopted price stability as their sole objective by adopting an inflation targeting framework, several other countries, viz., the United States and Japan continue to pursue dual objectives of price stability and growth. Similarly, while some emerging market economies (EMEs) such as South Africa, Thailand, Korea and Mexico have emphasised solely price stability by adopting an inflation targeting framework, some others tend to follow multiple objectives.

As central banks throughout the world could not always directly target the ultimate objective, monetary policy focused on intermediate targets that bear close relationship with the final objective. The selection of intermediate targets is conditional on the channels of monetary policy transmission that operate in the

Table 6.4 Operating procedures of liquidity management in developed countries

Country	*Objective*	*Intermediate/ Operating Target*	*Key Policy Indicators*	*Key Instruments of Discretionary Liquidity*					*Frequency of Market Operations*
				CRR	*OMO*	*REPO*	*Standing Facilities*	*Others*	
USA	To promote Maximum Sustainable Output, employment and stable prices	Federal Funds rate	Multiple Indicators Of current & Prospective Economic developments	Yes	Yes	Yes	Yes		Daily
UK	Price stability	Overnight market interest rate Consistent with Bank Rate	Monetary and credit Aggregates developments in interest rates, etc.	Yes	Yes	Yes	Yes		One per week plus one per month (long term repos)
Japan	Price stability & to contribute to the sound development of national economy	Overnight call money rate	Overall economic and financial indicators—wholesale prices, corporate service prices & money stock	Yes	Yes	Yes	Yes		More than one per day
Australia	Mainly price stability besides, maintenance of full employment, economic prosperity & welfare	Cash rate	Inflation & growth prospects, money & credit conditions		Yes	Yes	Yes		Daily
Canada	Low and stable inflation	Overnight rate	Output gap & wide range of indicators in various markets			Yes	Yes		Twice a day

Source: RBI, RCF, 2005-06.

Table 6.5 Operating procedures of liquidity management in developing countries

Country	*Objective*	*Intermediate/ Operating Target*	*Key Policy Indicators*	*Key Instruments of Discretionary Liquidity*					*Frequency of Market Operations*
				CRR	*OMO*	*REPO*	*Standing Facilities*	*Others*	
Mexico	Price stability	Bank reserves	Money & monetary base, inflation indicators, employment, exchange rate, Balance of Payments	Yes	Yes	Yes	Yes		Daily
China	Stability of the currency & thereby promote economic growth	Money supply/ excess reserves		Yes	Yes	Yes	Yes	Policy oriented financial bonds & central bank bonds	1 or 2 per week
India	Growth, price and financial stability	Overnight rate	Multiple indicators: broad money, interest rates, data on currency, credit, fiscal Position, trade, capital flows, inflation rate, Exchange rate, output Data, etc.	Yes	Yes	Yes	Yes	Market Stabilisation Scheme	Twice a day Repo
Malaysia	Monetary & financial stability for growth	Overnight interest rate	Real interest rates, inflation & inflation indicators, asset prices, credit, money & potential output.	Yes	Yes	Yes	Yes	Bank Negara Bills	Twice a day
Korea	Price Stability	Overnight call rate	Indicators of future inflation	Yes	Yes	Yes	Yes	Liquidity adjustment, loans and Intra day overdrafts	Weekly
Singapore	Price Stability as a sound basis for sustainable economic growth	Weighted Exchange rate	Interest rates & forward forex rates	Yes	Yes	Yes	Yes	Forex swaps & Reverse swaps	Twice a day

Source: RBI, RCF, 2005-06.

economy. Although countries differ in terms of the choice of instruments, they could be broadly classified on the basis of their key operating targets, that is, interest rates. In the first category are countries such as the United States, Japan, Canada and Australia, where the key operating target is the overnight inter-bank rate although the signalling strategies differ. In the case of other developed countries such as the ECB, the key policy rate is the tender rate that is applicable to regular operations, mainly, the refinancing operations. Some central banks, however, in countries such as the UK, select overnight market interest rates as their operating target consistent with the official bank rate decided by the MPC. In general, the maturity of such interest rates varies from 1 to 2 weeks but could range between 1 and 2 days to 1 month.

The operating target in the case of several EMEs also is the overnight rate—determined in the interbank market for settlement balances (Korea and Malaysia). In order to promote financial stability, central banks, being the monopolistic suppliers of primary liquidity, have endeavoured to smoothen the movements in the overnight rate with a high degree of precision through calibrated modulation of bank reserves. Central banks have generally refrained from strict control of interest rates as it deters the development of money markets. Allowing the volatility in the overnight rate to absorb temporary pressure could enable central banks to preserve stability in other money market segments.

The operating procedures of monetary policy and liquidity management have also changed in response to the changes in the policy environment amidst financial liberalisation. The literature and the central banks' own accounts attribute five main reasons for reform in their operating procedures in the industrial countries during the 1980s and the 1990s (Mehran *et al*., 1996). First, monetary policy instruments were changed to adapt to the new operational frameworks of the respective monetary authorities. Second, with financial deepening occurring more or less entirely outside the central banks' balance sheets, the share of the financial system over which monetary authorities had direct control was reduced, warranting indirect (price-oriented as opposed to quantity-oriented instruments) ways to control the non-monetary components of liquidity in the financial system. Third, in the wake of expansion, diversification and integration of financial markets all over the world, greater interest rate flexibility and narrowing of differentials between rates of return in different currencies warranted instruments that can impart flexibility to liquidity management in terms of the timing, magnitude and accuracy. Fourth, the growing importance of expectations in financial markets favoured the adoption of instruments that are better suited for signalling the stance of monetary policy. Finally, there was a growing urge on the part of central banks to stimulate money market activity and improve monetary policy transmission while emphasising the separation of monetary and government debt management objectives.

As a result of the changes in the policy environment, the following trends could be observed at the international level, particularly during the 1990s. First, there has been a continuous reduction in reserve requirements. The marked international trend towards reduction in reserve requirements over the last decade reflects the conscious policy effort to reduce the tax on intermediation with a view to reducing the burden of institutions and generate a level playing field, both between different types of domestic institutions and increasingly those across national borders. Second, there has been a growing emphasis on active liquidity management driven partly by the pressures of increasingly mobile international capital and decline in reserve requirements. The main instruments for liquidity management by central banks are discretionary market operations. Standing facilities have become 'safety valves' rather than the key mechanisms for setting the interest rate. Third, among the wide array of monetary policy instruments, repos have almost become the main policy tool, which could be considered a major milestone in the development of money markets. It is widely believed that the growth of the collateralised repo market has played an important role in enhancing the overall stability of the

financial system by removing counterparty risks through funded credit protection against risky transactions in unsecured wholesale financial markets (Joshi, 2005). Fourth, greater flexibility in liquidity management has been accompanied by a greater transparency in the policy signals relating to desired interest rate levels, driven by the broader changes in the economic and political environment, including the decline in inflation to relatively low levels, growing emphasis on inflation targeting, greater autonomy and accountability of central banks and growing influence of market forces and expectations in the formation of interest rates.

6.11 AUTONOMY OF THE CENTRAL BANK

LO 7
Describe the autonomy of the Central Bank

Central bank independence generally relates to three areas, *viz*., personnel matters, financial aspects and conduct of policy. Personnel independence refers to the extent to which the government distances itself from appointment, term of office and dismissal procedures of top central bank officials and the governing board. It also includes the extent and nature of representation of the government in the governing body of the central bank. Financial independence relates to the freedom of the central bank to decide the extent to which government expenditure is either directly or indirectly financed via central bank credits. Direct or automatic access of government to central bank credits would naturally imply that monetary policy is subordinated to fiscal policy. Finally, policy independence is related to the flexibility given to the central bank in the formulation and execution of monetary policy. Recent literature has stressed the difference between goal independence and instrument independence. Goal independence refers to a situation where the central bank itself can choose the policy priorities of stabilising output or prices at any given point of time, thus setting the goal of monetary policy. Instrument independence implies that the central bank is only free to choose the means to achieve the objective set by the government. In a recent survey (Fry, *et al*., 1999) of central banks, 40 of the total 56 central banks across a broad range of economies defined independence predominantly in terms of instrument independence. Of the remaining 16 responses, many highlighted factors that had implications for the relationship between the government and the central bank.

6.11.1 Advantages

Three different theories have been advanced in support of autonomy of central banks, *viz*., dynamic or time inconsistency theory, theory of political business cycle and the theory of public choice. Time inconsistency arises when the best plan (currently made for some future period) is no longer optimal when that period actually starts. In order to solve the time inconsistency problem, two distinct approaches have been advanced. The 'conservative central banker approach' postulates the appointment of a conservative central banker whose aversion to inflation is well known which would result in low inflation because of the economic agents' belief in the reputation of the central banker. The 'optimal contract approach' postulates the existence of an optimal contract between the central banker and the government. The central banker's tenure in office is conditional upon his performance of achieving low inflation, failure of which would lead to the repudiation of the contract of tenure. Historically, there are successful examples of both types of models of central bank independence—while the United States is often seen as an example of conservative central bank, New Zealand is characterised as a follower of optimal contract approach.

Second, the political business cycle theory studies the interaction between economic policy decisions and political considerations. The best known prediction of the theory is that the business cycle mirrors the timetable of the election cycle. Incumbent governments, in general, will use restrictive policies early in their elected tenure hence raising unemployment to reduce inflation as the election approaches. The theory highlights the tendencies of incumbent governments to generate pre-election booms through expansionary fiscal policies. Once the incumbents get re-elected, the policy priorities could change towards inflation control rather than employment generation. In this respect, the theory in a way highlights the time inconsistency behaviour of governments. As monetary policy affects the economy with long and variable lags, even if the central bank nullifies the fiscal stimulus through monetary tightening, its impact would typically be felt during the post-election period when the incumbents may happen to be back in power.

Finally, the fusion of politics and economics over the last 30 years has resulted in the theory of public choice, establishing itself as an important proponent of central bank independence. In the context of reducing budget deficit, the primary solution offered in public choice theory is a constitutional amendment for a pre-specified stipulation on central bank credit to government. Nevertheless, in recent years, as a secondary solution to the deficit problem, some public choice theorists put forward the case of an independent central bank. The basic contentions of these economists are that unless there are constitutional or institutional constraints to the contrary, a democracy contains a bias towards deficit finance; thus they operate within the premise that politicians do not necessarily pursue public interest but are more concerned with their personal or political agenda. In this context, some economists explicitly talk about central bank independence by providing a solution which will ensure not only low inflation but also act as an effective institutional constraint.

6.11.2 Limitations

First, detractors of autonomy argue that an independent central bank lacks democratic legitimacy. Curiously, such detractors derive strength from Milton Friedman's statement that money is too important an issue to be left to the whims of central bankers. Second, independence may lead to frictions between the fiscal and the monetary authorities and the resulting costs of these frictions between monetary and fiscal policy may be somewhat costly for society, thus inhibiting the development process. Third, there may be significant divergence in the preference pattern of independent central banks and the society at large. A strong central bank may impose its outlook on society resulting in a suboptimal state in terms of economic welfare. Adequate sources of accountability can, however, counteract and circumvent these problems. In fact, the opinions in this context differ widely on the relative importance between growth *vis-a-vis* inflation as objectives of monetary policy.

6.11.3 Measures of Autonomy and Relationship with Economic Performance

It is difficult to measure the degree of independence of various central banks. Existing research has generally focused primarily on legal independence, mostly in the industrialised countries. Legal independence measures may be a better proxy for actual independence in some countries where informal relations are not dominant. Thus, various proxies may be useful to get a complete picture, since they capture different aspects of independence. In quantifying the degree of independence, economists typically assign scorecards on different aspects of central banking. The final degree of independence is measured as the weighted sum

of 'marks' obtained under different heads such as indices of political and economic independence; index aggregated from a number of basic legal characteristics of central bank charters; index based on issues relating to composition of board members, frequency of transfers of central bank governors and so on. Recent attempts made to construct measures of central bank independence using different criteria and examine correlations among them reveal that the factors that affect central bank independence are highly diverse and the importance of each of these factors may have weights that vary markedly across countries, time and circumstances. In a recent IMF Working Paper published in April, 2007, where the indices of central bank autonomy have been calculated for 163 central banks as of end-2003, in a group of 32 emerging markets, India has scored 0.25 for political autonomy of the central bank as against the average score of 0.56 for the group of emerging markets and scored 0.75 for economic autonomy of the central bank which is the same as the average score for that group.

An inverse relationship between central bank independence and the level of inflation is supported by most empirical studies, but the causality between the rate of inflation and the degree of independence of the central bank may be viewed as bidirectional, since it would be argued that persistent high inflation led to changes in the operational framework in many countries.

6.11.4 Autonomy of Reserve Bank of India

In term of managerial autonomy the overall management of the RBI's affairs and business rests with the central board of directors. All directors of the central board, including the governor and the deputy governors, are appointed by the government and they could be superseded or removed. On financial aspects of the Reserve Bank *vis-à-vis* the government, the phasing out of automatic monetisation of fiscal deficits by 1997 and the enactment of the Fiscal Responsibility and Budget Management (FRBM) legislation in 2003 are two important milestones in the direction of providing safeguards to monetary policy from the consequences of expansionary fiscal policy and ensuring a degree of autonomy of the Reserve Bank. Consequently, barring emergencies, there are limits to the ways and means advances by the Reserve Bank to the government and prohibition on Reserve Bank from participating in primary issuance of all government securities. The RBI has gradually withdrawn from the practice of providing concessional finance or refinance for specified sectors, though the statutory provisions continue to enable it. The Reserve Bank advocates direct fiscal support to the developmental activities so that the support is transparent, accountable and quantifiable, rather than through monetary operations of Reserve Bank, which would tantamount to quasi-fiscal operations.

The relationship between the Government of India and the Reserve Bank is harmonious. In this context Dr. Bimal Jalan at the time of laying down office as Governor in 2003 remarked: 'the autonomy of a central bank is best set by convention rather than by statute, especially in emerging countries. There should be harmony between the government and the central bank with shared objectives, though the instrumentalities in achieving the objectives may be different'. In sum, *de jure*, the Reserve Bank has not been accorded autonomy on par with recent trends in some of the industrialised as well as emerging economies; but, *de facto*, the recent experience reflects a progressively higher degree of autonomy being enjoyed by the RBI. During the period of reform, since 1991, there has been a gradual and mutually agreed progress towards greater autonomy in matters relating particularly to the financial markets and the conduct of monetary policy.

The issue of the autonomy of the RBI has received much attention in recent years. The agreements signed on September 9, 1994 and March 6, 1997 between the GOI and the RBI with regard to phasing out of the ad hoc

treasury bills, and the introduction of the System of Ways and Means Advances (WMA) by the RBI to the GOI, have been projected as indicators of the RBI having become more independent now.[23] The system of WMA in the place of that of issuing ad hoc treasury bills has been regarded as a significant development in the direction of a desirable and better fiscal policy—monetary policy coordination. The accord between the RBI and the government reached in 1994 eliminated the automatic monetisation of the central government fiscal deficit through the issue of ad hoc TBS by April 1997. Under WMA, the RBI gives ways and means advances to the central government in mutually agreed amounts at market-related interest rates. Under this system, since the RBI has the right to trigger floatation of fresh government loans as and when the actual utilisation of WMA crosses 75 percent of the limit, the WMA does not acquire the cumulative character of the ad hoc. Thus, the RBI now can accommodate the government at its discretion, and can impose market discipline on fiscal profligacy. However, the new system notwithstanding, the fiscal dominance has continued to persist as reflected in the growing volume of government borrowings.

Important as these agreements are, they have not made the RBI more autonomous except very marginally. The autonomy of the Central Bank is a much bigger, wider and more complex issue. The meaning of Central Bank autonomy encompasses the legal status; freedom in respect of the conduct of monetary policy, government financing and the Central Bank's own financing; and the independence from national and international business as well as international financial organisations. The sources of autonomy involve statutory provisions, the constitution and the mettle of the governing board, the spirit and character of the staff and the people's perception. For the RBI to become really autonomous, a rethinking on the role of the state in the economy, on globalisation and a significant change in the attitude of the staff are prerequisites.

SUMMARY

- The Reserve Bank of India is the central and apex banking institution in India. It is a state-owned organisation that functions as a corporate body with special powers and obligations for serving the national interest. Its major functions and responsibilities are (a) to issue and manage currency, (b) to serve as a banker to the government, (c) to act as bankers' bank, (d) to supervise and control commercial and cooperative banks, and other financial institutions, (e) to promote the development and healthy functioning of financial institutions and markets, (f) to manage the rupee exchange rate and foreign exchange reserves, and (g) to regulate or control money and credit.
- The objectives of the monetary policy of the RBI have been (a) price stability, (b) controlled expansion of bank credit, (c) promotion of fixed investment, (d) restriction of inventories, (e) promotion of exports and food procurement operations, and (f) equitable distribution of credit. The theoretical foundations of its policy have been eclectic; ideas from different schools of thought have guided the formulation and conduct of its policy. Variables such as prices, money supply, bank credit, borrowings from the RBI and inventories have served as the indicators/targets of the RBI policy.
- Over the years, the use of many techniques, such as OMO, bank rate and SLR have been influenced by considerations of debt management and government finance. Distribution and regulation have been the key concepts underlying the RBI's monetary management policy.
- During the post-1991 period, the RBI has promoted greater market orientation in the financial system, and it has moved out of micro-regulation.

- The repo rate and other interest rates are being emphasized now as the potential instruments of monetary policy in India.
- The evolution of monetary policy framework in India can be seen in five different phases.
- The revised corridor was defined with a fixed width of 200 basis points. The repo rate was placed in the middle of the corridor, with the reverse repo rate 100 basis points below it and the MSF rate 100 basis points above it.
- The RBI stance on the CRR technique is not 'convincing'; it is neither desirable nor possible to discard or deactivate this technique in India.
- Banks have a special place in the Indian financial system, and it is not in the interest of the effectiveness of monetary policy to allow their role to be undermined.
- It cannot be stated with certainty that the demand for money function in India is stable. The relevance of money supply as the target of monetary policy, therefore, should not be overemphasized.
- The monetary authorities have adopted a modified 'inflation targeting' in India, that is, they have adopted a 'middle ground' approach in which they try to ensure easy availability of credit for industrial revival, while keeping a constant vigil over the price level.
- The introduction of LAF has been one of the most important innovations in the Indian money market as a technique of monetary policy in and after the year 2000.
- The LAF technique has been actively used since its introduction; the repo and reverse repo rides have been frequently changed over a wide range, and the amount of liquidity absorbed through it has been large.
- The operating procedure of monetary policy in other developed and developing countries comprises OMO, CRR and Repo.
- Under Market Stabilization Scheme, issue of T-Bills and dated securities are to be held by the government in a separate identifiable cash amount maintained and operated by RBI for liquidity management.
- The RBI has still a long way to go before it can be called an autonomous central bank; the signing of agreements between the bank and the GOI is only a beginning in the process of attaining autonomy.

KEY TERMS

Reserve Bank of India	Cash Reserve Ratio	Liquidity Adjustment Facility
Central Bank Autonomy	Ways and Means Advances	Statutory Liquidity Ratio
Repo Rate	Refinancing	Public Debt
Bank Rate	Reverse Repo Rate	Rediscounting
Monetary Policy	Open Market Operation	Market Stabilization Scheme
Inflation Targetting		

QUESTIONS

1. What are the important functions of Reserve Bank of India?
2. Critically examine the theoretical basis of monetary policy of RBI.

3. Explain the various objectives of monetary policy of RBI.
4. Briefly discuss the various techniques used for monetary control or to maintain the price stability in India.
5. Discuss all the five phases of operating procedures of monetary policy framework in India.
6. What is the monetary policy corridor and why the corridor should be maintained?
7. What are the major changes in the refinance policy affected by the bank during the period after independence? Highlight the recent monetary policy developments in India during the post-liberalisation period.
8. Write short notes on the following:
   (a) Open market operation
   (b) Direct regulation of interest rates
   (c) Credit rationing
   (d) Credit authorization scheme
   (e) Autonomy of monetary policy
9. 'Reserve Bank of India acts as a promoter of the financial system'. Justify.
10. Write short notes on following:
    (a) Liquidity adjustment facility
    (b) Market Stabilisation Scheme
    (c) Inflation targeting
11. Explain the liquidity management process carried out by RBI during 2002–2003 to 2014–2015.
12. What are the challenges to monetary policy in India?
13. Define central bank autonomy and give the advantages and disadvantages of central bank autonomy.
14. How do you measure the central bank autonomy and what is the relationship between central bank autonomy and economic performance?
15. Explain the operating procedure of liquidity management in developed and developing countries.

Other Regulatory Institutions in India: SEBI, IRDA and PFRDA

7 CHAPTER

Learning Objectives

LO 1 Know in detail, various aspects of the functioning of the Securities and Exchange Board of India

LO 2 Understand Insurance Regulatory Development Authority

LO 3 Discuss in detail Pension Fund and Regulatory Development Authority

7.1 INTRODUCTION

The purpose of this chapter is to discuss various aspects of the functioning of the Securities and Exchange Board of India (SEBI, Pension Fund Regulatory Development Authority (PFRDA) and Insurance Regulatory Development Authority (IRDA) which have emerged as important constituents of the system that now exists to regulate, control and monitor the Indian financial system (IFS).

7.2 SECURITIES AND EXCHANGE BOARD OF INDIA (SEBI)

LO 1
Know in detail, various aspects of the functioning of the Securities and Exchange Board of India

The year 1991 witnessed a big push being given to liberalisation and reforms in the Indian financial sector. For sometime thereafter, the volume of business in the primary and secondary securities markets increased significantly. As a part of the same reform process, the globalisation or internationalisation of the Indian financial system made it vulnerable to external shocks. The multicrore securities scam rocked the IFS in 1992. All these developments impressed on the authorities the need to have in place a vigilant regulatory body or an effective and efficient watchdog. It was felt that the then existing regulatory framework was fragmented, ill-coordinated and inadequate and that there was a need for an autonomous, statutory, integrated organisation to ensure the smooth functioning of the IFS. The SEBI came into being as a response to these requirements. The SEBI was established on 12 April, 1988 through an administrative order, but it became a statutory and really powerful organisation only since 1992. The CICA was repealed and the office of the CCI was abolished in 1992, and the SEBI was set up on 21 February, 1992 through an ordinance issued on 30 January, 1992. The ordinance was replaced by the SEBI Act on 4 April, 1992. Certain powers under certain sections of

SCRA and CA have been delegated to the SEBI. The regulatory powers of the SEBI were increased through the Securities Laws (Amendment) Ordinance of January, 1995 which was subsequently replaced by an Act of Parliament. The SEBI is under the overall control of the Ministry of Finance, and has its head office at Mumbai. It has now become a very important constituent of the financial regulatory framework in India.

The philosophy underlying the creation of the SEBI is that multiple regulatory bodies for securities industry mean that the regulatory system gets divided, causing confusion among market participants as to who is really in command. In a multiple regulatory structure, there is also an overlap of functions of different regulatory bodies. Through the SEBI, the regulation model which is sought to be put in place in India is one in which every aspect of securities market regulation is entrusted to a single highly visible and independent organisation, which is backed by a statute, and which is accountable to the Parliament and in which investors can have trust.

7.2.1 Constitution and Organisation

The SEBI is a body of eight members comprising the chairman, three full time members, one part time member and two officials of the ministries of the central government dealing with finance and law and one member from the RBI. All members, except the RBI member, are appointed by the government, who also lays down their terms of office, tenure and conditions of service, and who can also remove any member from office under certain circumstances. The Central government is empowered to supersede the SEBI in public interest, or if, on account of grave emergency, it is unable to discharge its functions or duties, or if it persistently defaults in complying with any direction issued by the government, or if its financial position and administration deteriorates.

The work of the SEBI has been organised into various operational departments each of which is headed by an executive director who reports to the whole-time members and chairman. Besides, there is a legal department and the investigation department. The departments have been divided into divisions. The various departments and the scope of their activities are as follows:

Market Intermediaries Regulation and Supervision Department (MIRSD)

The Market Intermediaries Regulation and Supervision Department is responsible for the registration, supervision, compliance monitoring, and inspections of all market intermediaries in respect of all segments of the markets, *viz*., equity, equity derivatives, currency derivatives, debt and debt-related derivatives. The department also handles the work related to registration, supervision, compliance monitoring, inspections, investor grievances, and policy-related issues of commodity derivatives brokers. The department also handles the work related to action against the intermediaries for regulatory violations.

Market Regulation Department (MRD)

The Market Regulation Department is responsible for supervising the functioning and operations (except relating to derivatives) of securities exchanges, their subsidiaries and market institutions such as clearing and settlement organizations and depositories.

Commodity Derivatives Market Regulation Department (CDMRD)

The Commodity Derivatives Market Regulation Department is responsible for supervising the functioning and operations of commodity derivative exchanges.

Corporation Finance Department (CFD)

The Corporation Finance Department deals with matters relating to (i) issuance and listing of securities, including initial and continuous listing requirements, (ii) corporate governance and accounting/auditing standards, (iii) corporate restructuring through takeovers/buy backs, (iv) delisting and so on.

Investment Management Department (IMD)

The Investment Management Department is responsible for registering and regulating mutual funds, venture capital funds, foreign venture capital investors, collective investment schemes including plantation schemes, foreign institutional investors, portfolio managers, and custodians.

Integrated Surveillance Department (ISD)

The Integrated Surveillance Department is responsible for monitoring market activity through market systems, data from other departments and analytical software. The department is responsible for (i) developing, maintaining, and operating an integrated market surveillance system including monitoring of all segments of the markets, (ii) developing methodologies for capturing information from media review, public complaints and tips, other agencies, exchanges, and direct solicitations; assignment of staff to handle functions; evolving methods of logging and cataloguing information; criteria for evaluating and distributing information; input into tracking; and other systems, (iii) recognizing potentially illegal activities and referrals to investigations, enforcement or other departments, and (iv) market surveillance for commodity derivative market.

Investigations Department (IVD)

The Investigations Department is responsible for (i) conducting investigations on potentially illegal market activities, (ii) providing referrals to the enforcement department, and (iii) assisting the enforcement department in enforcing SEBI action against violators.

Enforcement of Department (EFD)

Enforcement Department is responsible for proceedings related to regulatory action and obtaining redress for violations of securities laws and regulations against all market participants, issuers and individuals and other entities that breach securities laws and regulations.

Legal Affairs Department (LAD)

The Department of Legal Affairs would be responsible to provide legal counsel to the board and to its other departments, and to handle non-enforcement litigation.

Enquiries and Adjudication Department (EAD)

The Enquiries and Adjudication Department would handle quasi-judicial matters and provide timely hearings and initiate adjudication brought by other departments against alleged violators who are within SEBI's disciplinary jurisdiction.

Table 7.1 shows the various market intermediaries registered in SEBI during 1993–1994 to 2014–2015. Most of the intermediaries have increased throughout the period reflecting the growth of the capital market in India.

Table 7.1 SEBI-registered market intermediaries

Market intermediaries	*1993*	*2000*	*2006*	*2011*	*2015*
Stock exchanges (Cash market)	21	23	22	19	15
Stock exchanges (Derivatives market)	—	2	2	2	3
Stock exchanges (Currency derivatives)	—	—	—	4	3
Stock exchanges (Commodity derivatives)	—	—	—	—	—
Brokers (Cash segment)	5290	9192	9335	9235	5899
Corporate brokers (Cash segment)	—	3316	3961	4563	3677
Sub-brokers (Cash segment)	—	4675	23479	83952	42409
Brokers (Derivatives)	—	—	1120	4195	5165
Foreign institutional investors	18	506	882	1722	1710
Custodians	—	15	11	19	19
Depositories	—	2	2	2	2
Depository participants	—	191	526	805	854
Merchant bankers	74	186	130	192	197
Bankers to an issue	—	68	60	55	60
Underwriters	—	42	57	3	2
Debenture trustees	—	38	32	29	32
Credit rating agencies	—	4	4	6	6
Venture capital funds	—	—	80	184	201
Foreign venture capital Investors	—	—	39	153	204
Registrars to an issue and share transfer agents	—	242	83	73	72
Portfolio managers	—	23	132	267	188
Mutual funds	28	38	38	51	47
Approved intermediaries (Stock lending schemes)	—	6	3	2	2

Source: SEBI, Handbook of Statistics.

7.2.2 Objectives and Regulatory Approach

The overall objective of the SEBI, as enshrined in the preamble of the SEBI Act, 1992 is 'to protect the interests of investors in securities and to promote the development of, and to regulate the securities market and for matters connected therewith or incidental thereto'. To elaborate, the SEBI regulates stock exchanges and securities industry to promote their orderly functioning. It protects the rights and interests of investors, particularly, individual investors, and guides/educates them. It prevents trading malpractices and aims at achieving a balance between self-regulation by securities industry and its statutory regulation.

Having regard to the emerging nature of the securities markets in India, the SEBI necessarily has the twin task of regulation and development. Its regulatory measures are always meant to be subservient to the needs of the market development. Underlying those measures is the logic that rapid and healthy market development is the outcome of well-regulated structures. In this spirit, the SEBI endeavours to create an effective surveillance mechanism and encourage responsible and accountable autonomy on the part of all players in the market,

who are expected and required to discipline them and observe the rules of the market. The self-regulation and regulation by exception are thus the corner stones of its regulatory framework. The SEBI believes that self-regulation can work only if there is an effective regulatory body overseeing the activities of self-regulatory organisations.

The SEBI also aims at facilitating an efficient mobilisation and allocation of resources through the securities markets, stimulating competition and encouraging innovations. Its regulation is expected to be flexible, cost-effective and confidence-inspiring. To investors, the SEBI provides a high degree of protection of their rights and interests through adequate, accurate and authentic information and disclosure of such information on a continuous basis. To issuers, it provides a market place in which they can confidently raise all the finance they need in an easy, fair and efficient manner. To the market intermediaries, it offers a competitive, professionalised and expanding market with adequate and efficient infrastructure so that they can render better and more responsible service to the investors and issuers.

7.2.3 Powers, Scope, and Functions

The scope of operations of SEBI is very wide; it can frame or issue rules, regulations, directives, guidelines, norms in respect of both the primary and secondary markets, intermediaries operating in these markets and certain financial institutions.

Major Functions of SEBI

- To protect the interests of investors in securities and to promote the development of, and to regulate the securities market.
- To regulate the business in stock exchanges.
- To register and regulate the working of stock brokers, sub-brokers, share transfer agents, bankers to an issue, trustees of trust deeds, registrars to an issue, merchant bankers, underwriters, portfolio managers, investment advisers and so on.
- To register and regulate the working of the depositories, participants, custodians of securities, foreign institutional investors, credit rating agencies and so on.
- To register and regulate the working of venture capital funds and collective investment schemes, including mutual funds.
- To promote and regulate self-regulatory organisations.
- To prohibit fraudulent and unfair trade practices relating to securities markets.
- To promote investors' education and training of intermediaries of securities markets.
- To prohibit insider trading in securities.
- To regulate substantial acquisition of shares and takeover of companies.
- To call for information from, undertaking inspection, conducting inquiries and audits of the stock exchanges, mutual funds and other persons associated with the securities market intermediaries and self-regulatory organizations in the securities market.
- To perform such functions and exercising such powers under the provisions of the Securities Contracts (Regulation) Act, 1956 (42 of 1956), as may be delegated to it by the central government.
- To levy fees or other charges for carrying out the purposes of this section.
- To conduct research for the above purposes.

- To call from or furnishing to any such agencies, as may be specified by the board, such information as may be considered necessary by it for the efficient discharge of its functions.
- The SEBI can issue guidelines in respect of (a) information disclosure, operational transparency and investor protection, (b) development of financial institutions, (c) pricing of issues, (d) bonus issues, (e) preferential issues, (f) financial instruments, (g) firm allotment and transfer of shares among promoters.

Powers of SEBI

- The SEBI is empowered to register any agency or intermediary who may be associated with the securities market and none of them shall buy, sell or deal in securities except under and in accordance with the conditions of a certificate of registration issued by the SEBI. However, the Government of India (GOI) is empowered to exempt any person or class of persons from registration with the SEBI.
- The SEBI can suspend or cancel a certificate of registration issued by it to anyone, after giving him a reasonable opportunity of being heard.
- The SEBI Act lays down the civil and criminal penalties for contravention of the Act; anyone who contravenes or attempts to contravene or abets contravention of the provisions of the Act or of any rules or regulations made thereunder, is punishable with imprisonment or fine or both.
- As said earlier, with the repeal of the CICA, all matters related to the issue of capital are now governed by the guidelines issued by the SEBI.
- Similarly, as a result of the delegation of certain powers under the SCRA to the SEBI, the latter can conduct inquiries into the working of the stock exchanges which have to submit their annual reports to the SEBI and seek its approval for amending their rules and bye-laws; it can direct them to amend their bye-laws and rules including reconstitution of their governing boards/councils and it is empowered to license security dealers operating outside their jurisdiction.
- Consequent on the amendments to the SEBI Act in 1995, the regulatory powers over corporates in the issuance of capital, transfer of securities and other related matters are now vested in the SEBI.
- The amendments also provide for the deletion of the existing provision relating to disqualification of a member of the SEBI Board on his being appointed as a director of a company.
- The SEBI has also been empowered to demand explanations, to summon the attendance and call for documents from all categories of market intermediaries in order to enable it to investigate irregularities, impose penalties and initiate prosecution.
- The SEBI has also been empowered now to notify its regulations and file complaints in courts without the prior approval of the GOI.

However, in the exercise of its powers and in performing its functions, the SEBI is bound by such directions on questions of policy as the GOI may give in writing from time to time. Although it has the opportunity to express its views before any direction is given, the decision of the GOI is final in every case.

7.2.4 Pre-Issue Obligations Imposed by SEBI[1]

- The lead merchant banker shall exercise due diligence and satisfy himself about all the aspects of offering, veracity and adequacy of disclosure in the offer documents.

[1]http://www.sebi.gov.in/guide/sebidipguideaug09.pdf.

- The liability of the merchant banker shall continue even after the completion of issue process.
- The lead merchant banker shall pay requisite fee in accordance with the regulation 24A of Securities and Exchange Board of India (Merchant Bankers) Rules and Regulations, along with draft offer document to be filed with the board. In case of a fast track issue, the requisite fee shall be paid along with the copy of the red herring prospectus, prospectus or letter of offer.
- The lead merchant banker shall ensure that facility of applications supported by blocked amount is provided in all book-built public issues and rights issues, which provide for not more than one payment option to the retail individual investors. Along with the offer document the lead manager has to submit the Memorandum of Understanding (MoU)[2].
- In case a public or rights issue is managed by more than one merchant banker, the rights, obligations and responsibilities of each merchant banker should be highlighted. In case of under-subscription at an issue, the lead merchant banker responsible for underwriting arrangements shall invoke underwriting obligations and ensure that the underwriters pay the amount of devolvement and the same shall be incorporated in the *inter se* allocation of responsibilities accompanying the due diligence certificate submitted by the lead merchant banker to the SEBI .
- The lead merchant banker shall furnish the following certificates duly signed by the company secretary or chartered accountant along with the draft offer documents: (i) all refund orders of the previous issues that were despatched within the prescribed time and in the prescribed manner, (ii) all security certificates that were despatched to the allottees within the prescribed time and in the prescribed manner, and (iii) the securities that were listed on the stock exchanges as specified in the offer documents.
- The issuer shall submit an undertaking to SEBI to the effect that transactions in securities by the 'promoter', the 'promoter group' and the immediate relatives of the 'promoters' during the period between the date of filing the offer documents with the registrar of companies or stock exchange, as the case may be, and the date of closure of the issue shall be reported to the stock exchanges concerned within 24 hours of the transaction(s).
- The issuer company shall submit to the board the list of the persons who constitute the promoters' group and their individual shareholding. The issuer company shall submit to the stock exchanges on which securities are proposed to be listed, the permanent account number, bank account number and passport number of the promoters at the time of filing the draft offer document to them.
- A merchant banker shall not lead or manage the issue if he is a promoter or a director or an associate of the issuer company. Provided that a merchant banker holding the securities of the issuer company may lead or manage the issue if, the securities of the issuer company are listed or proposed to be listed on the Over the Counter Exchange of India (OTCEI) or the market makers have either been appointed or are proposed to be appointed as per the offer document. Provided further that a merchant banker who is an associate of the issuer company may be appointed as a merchant banker for the issue, if it is involved only in the marketing of the issue.
- Lead merchant bankers shall ensure that the number of co-managers to an issue does not exceed the number of lead merchant bankers to the said issue and there is only one advisor to the issue. The lead merchant banker shall not act as a registrar to an issue in which it is also handling the post-issue responsibilities. The lead merchant bankers shall ensure that the registrars to issue registered with the

[2]It is being entered into between a lead merchant banker and the issuer company specifying their mutual rights, liabilities and obligations relating to the issue.

board are appointed in all public issues and rights issues and in case where the issuer company is a registered registrar to an issue, the issuer shall appoint an independent outside registrar to process its issue. Registrar to an issue which is associated with the issuer company as a promoter or a director shall not act as registrar for the issuer company.

- Where the number of applications in a public issue is expected to be large, the issuer company in consultation with the lead merchant banker may associate one or more registrars registered with the board for the limited purpose of collecting the application forms at different centres and forward the same to the designated registrar to the issue as mentioned in the offer document. The designated Registrar to the Issue shall, be primarily and solely responsible for all the activities as assigned to them for the issue management.
- The lead merchant bankers shall satisfy themselves about the ability of the underwriters to discharge their underwriting obligations. The lead merchant banker shall incorporate a statement in the offer document to the effect that in the opinion of the lead merchant banker, the underwriters' assets are adequate to meet their underwriting obligations and obtain underwriters' written consent before including their names as underwriters in the final offer document.
- In respect of every underwritten issue, the lead merchant banker(s) shall undertake a minimum underwriting obligation of 5 percent of the total underwriting commitment or ₹25 lakh whichever is less. The outstanding underwriting commitments of a merchant banker shall not exceed 20 times its net worth at any point of time. In respect of an underwritten issue, the lead merchant banker shall ensure that the relevant details of underwriters are included in the offer document.
- The draft offer document filed with the board shall be made public for a period of 21 days from the date of filing the offer document with the board. The lead merchant banker shall, simultaneously file copies of the draft offer document with the stock exchanges where the securities offered through the issue are proposed to be listed and make copies of offer document available to the public.
- The issuer company shall soon after receiving final observations make an advertisement in an English national daily with wide circulation, one Hindi national newspaper and a regional language newspaper with wide circulation at the place where the registered office of the issuer is situated, which shall be in the format and contain the minimum disclosures as specified. Provided that in case of a fast track issue, the advertisement shall be made before the issue opening date.
- Every unlisted company obtaining grading for IPO shall disclose all the grades obtained, along with the rationale/description furnished by the credit rating agency for each of the grades obtained, in the prospectus, abridged prospectus, issue advertisements and at all other places where the issuer company is advertising for the IPO.
- The lead merchant banker shall ensure that for public issues offer documents and other issue materials are dispatched to the various stock exchanges, brokers, underwriters, bankers to the issue, investors associations and so on in advance as agreed upon.
- In the case of rights issues, lead merchant banker shall ensure that the abridged letters of offer along with composite application form are dispatched to all shareholders at least 3 days before the date of opening of the issue.
- The lead manager shall ensure that the issuer company has entered into agreements with all the depositories for dematerialisation of securities. He shall also ensure that an option be given to the investors to receive allotment of securities in dematerialised form through any of the depositories.

7.2.5 Post-Issue Obligations Imposed by SEBI[3]

- Irrespective of the level of subscription, lead merchant banker shall ensure the submission of the post-issue monitoring reports as specified within 3 working days from the due dates.
- The post-issue lead merchant banker shall actively associate himself with post-issue activities, namely, allotment, refund, despatch and giving instructions to self-certified Syndicate Banks and shall regularly monitor redressal of investor grievances arising therefrom.
- The post-issue lead merchant banker shall maintain close coordination with the registrars to the issue and arrange to depute its officers to the offices of various intermediaries at regular intervals after the closure of the issue to monitor the flow of applications from collecting bank branches, processing of the applications including and other matters till the basis of allotment is finalised, despatch security certificates and refund orders completed and securities listed.
- If the issue is proposed to be closed at the earliest closing date, the lead merchant banker shall satisfy himself that the issue is fully subscribed before announcing closure of the issue. In case of no definite information about subscription figures, the issue shall be kept open for the required number of days to take care of the underwriters' interests and to avoid any dispute with the underwriters in respect of their liability. In case there is a devolvement on underwriters, the lead merchant banker shall ensure that the underwriters honour their commitments within 60 days from the date of closure of the issue. In case of undersubscribed issues, the lead merchant banker shall furnish information in respect of underwriters who have failed to meet their underwriting devolvement to the board.
- The post-issue lead merchant banker shall ensure that moneys received pursuant to the issue and kept in a separate bank (i.e. bankers to an issue), is released by the said bank only after the listing permission under the said section has been obtained from all the stock exchanges where the securities was proposed to be listed.
- Post-issue lead merchant banker shall ensure that advertisement giving details relating to oversubscription, basis of allotment, number, value and percentage of all applications including applications supported by blocked amount, number, value and percentage of successful allottees for all applications including applications supported by blocked amount, date of completion of despatch of refund orders, date of despatch of certificates and date of filing of listing application is released within 10 days from the date of completion of various activities at least in an english national daily with wide circulation, one hindi national paper and a regional language daily circulated at the place where registered office of the issuer company is situated.
- The basis of allotment shall be signed as correct by the executive director/managing director of the designated stock exchange and the public representative (where applicable) in addition to the lead merchant banker responsible for post-issue activities and the registrar to the issue.
- The lead merchant banker shall ensure that the despatch of share certificates/refund orders and demat credit is completed and the allotment and listing documents are submitted to the stock exchanges within 2 working days of the date of allotment.
- The lead merchant bankers are liable to take all steps for completion of the necessary formalities for listing and commencement of trading at all stock exchanges where the securities are to be listed within 7 working days of finalisation of basis of allotment. Lead merchant banker are liable to pay the interest to

[3]http://www.sebi.gov.in/guide/sebidipguideaug09.pdf.

the applicants for delayed dispatch of allotment letters, refund orders, and so on. Post-issue lead merchant banker shall continue to be responsible for post-issue activities till the subscribers have received the shares/debenture certificates or refund of application moneys and the listing agreement is entered into by the issuer company with the stock exchange and listing/trading permission is obtained.

7.2.6 Bonus Issue Guidelines of SEBI

A listed company proposing to issue bonus shares shall comply with the following:

- No company shall, pending conversion of FCDs/PCDs, issue any shares by way of bonus unless similar benefit is extended to the holders of such FCDs/PCDs, through reservation of shares in proportion to such convertible part of FCDs or PCDs.
- The shares so reserved may be issued at the time of conversion of such debentures on the same terms on which the bonus issues were made.
- The bonus issue shall be made out of free reserves made out of the genuine profits or share premium collected in cash only.
- Reserves created by revaluation of fixed assets should not be capitalised.
- The declaration of bonus issue, in lieu of dividend, should not be made.
- The bonus issue is not made unless the partly-paid shares are fully paid up.
- The company should not be in default of payment of interest or principal in respect of fixed deposits and interest on existing debentures or principal on redemption and has sufficient reason to believe that it has not defaulted in respect of the payment of statutory dues of the employees such as contribution to provident fund, gratuity, bonus and so on.
- A company which announces bonus issue after the approval of board of directors and does not require shareholders' approval for capitalisation of profits or reserves for making bonus issue as per the Articles of Association, shall implement bonus issue within 15 days from the date of approval of the issue by the board of directors of the company and shall not have the option of changing the decision.
- A company which announces its bonus issue after the approval of the board of directors must implement the proposal within a period of 6 months from the date of such approval and shall not have the option of changing the decision. Provided where the company is required to seek shareholders' approval for capitalisation of profits or reserves for making bonus issue as per the Articles of Association, the bonus issue shall be implemented within 2 months from the date of the meeting of the board of directors wherein the decision to announce bonus was taken subject to shareholders' approval.
- The Articles of Association of the company shall contain a provision for capitalisation of reserves and so on and if no provision is given, the company shall pass a resolution at its general body meeting making provisions in the Articles of Associations for capitalisation.
- Consequent to the issue of bonus shares, if the subscribed and paid-up capital exceed the authorised share capital, a resolution shall be passed by the company at its general body meeting for increasing the authorised Capital.

7.2.7 Measures Taken by SEBI

Since the enactment of the SEBI Act in 1992, financial institutions, agencies and market intermediaries mentioned above are now being governed by the guidelines, rules and regulations notified by the SEBI from

time to time. Due to lack of space, it is not possible to present their exhaustive list here. We give below only the major policy measures and reforms introduced by the SEBI during 1992–2015.

- The issues of capital by companies no longer require any consent from any authority either for making the issue or for pricing it.
- Efforts have been made to raise the standards of disclosure in public issues and enhance their transparency. The SEBI has accepted and implemented almost all the recommendations of Malegam Committee appointed by it in 1994–1995 in this connection.
- Companies making their first public issue are eligible to do so only if they have 3 years of dividend-paying track record preceding an issue. Those not meeting this requirement can still make an issue if their projects are appraised by banks or FIs with minimum 10 percent participation in the equity capital of the issuer, or if their securities are listed on the OTCEI (Over-the-Counter Exchange of India).
- Allocation of shares to retail individual investors has been increased from 25 percent to 35 percent of the total issue of securities in case of book-built issues. The retail individual investor has been redefined as one who applies or bids for securities of or for a value not exceeding ₹2 lakh, as against the earlier limit of ₹50,000.
- Within the category of qualified institutional buyers (QIBs), there was no specific allocation for any group in case of book-built issues. In order to increase the retail participation through mutual funds, SEBI introduced a specific allocation of 5 percent within the QIB category with effect from 19 September 2005. The mutual funds are also eligible for allotment from the balance available for the QIB category.
- In order to ensure faster and hassle-free refunds, it was decided to extend the facility of electronic transfer of funds to public issue refunds, initially at 15 centres where clearing houses are managed by RBI.
- With a view to assisting the investors, particularly the retail investors, SEBI has given in-principle approval for grading of IPOs by the rating agencies at the option of the issuers. SEBI will not certify the assessment made by the rating agencies.
- Under the listing agreement, a listed company is required to make continuous disclosures to the stock exchanges. In order to rationalise the disclosure requirements, it was decided to do away with the repetitive disclosures in case of rights issues and public issues by the listed companies which have a satisfactory track record of filing periodic returns with the stock exchanges and have a comprehensive mechanism for satisfactory redressal of investor grievances.
- In order to bring uniformity in the practice of making available abridged offer documents, it was decided to permit an issuer company making a rights issue, to despatch an abridged letter of offer, which shall contain disclosures, as required to be given in the case of an abridged prospectus.
- In case of a fixed price issue, a company is required to disclose the issue price or the price band in the offer document filed with SEBI. In order to provide flexibility, it was decided to allow a listed company to fix and disclose the issue price in case of a rights issue any time prior to fixing of the record date in consultation with the designated stock exchange, and in case of public issue through fixed price route, at any time prior to filing of prospectus with the registrar of companies.
- Further issue of capital by a company, after filing a draft offer document with SEBI, was prohibited till the listing of shares that are referred to in the offer document. In order to facilitate additional resource mobilisation, a company has been permitted to issue further shares, provided full disclosures as regards the total capital to be raised from such further issues are made in the draft offer document.

- Under Clause 49 of the Listing Agreement, listed companies were advised to comply with the revised guidelines on corporate governance, including appointment of the independent directors. Initially the compliance date was 1 April, 2005, which was subsequently extended to 31 December, 2005. Without further extension of the deadline, a few clarifications were given in January, 2006 relating to maximum gap between two board meetings, sitting fees of the non-executive directors and certification on internal control system by the CEO/CFO.
- To enable a minimum level of public shareholding, listed companies will now be required to maintain minimum level of public shareholding at 25 percent of the total shares issued for continued listing on stock exchanges. Exemptions are provided to companies which are required to maintain at least 10 percent but less than 25 percent in accordance with the Rule 19(2)(b) of the Securities Contracts (Regulation) Rules, 1957 and to companies that have 2 crore or more number of listed shares, and market capitalisation of ₹1000 crore or more.
- SEBI framed guidelines relating to disclosure of grading of the initial public offer (IPO) by issuer companies who may want to opt for grading of their IPOs by the rating agencies. If the issuer companies opt for grading, then they are required to disclose the grades, including the unaccepted ones, in the prospectus.
- SEBI directed, both BSE and NSE, to introduce a trade reporting platform for corporate bonds. At the instance of SEBI, BSE and NSE jointly launched a common portal www.corpfiling.co.in on 1 January, 2007, for dissemination of filings made by companies listed on these exchanges, in terms of the listing agreement.
- Computerised or screen-based trading has been achieved on almost all exchanges except some of the smaller ones.
- A process through which investor grievances against brokers may find redressal through a complaint to the SEBI has been put in place. The redressal rate is more than 95 percent in the year 2014–2015.
- All the recommendations of the Dave Committee for improving the working of the OTCEI have been accepted.
- The SEs have been instructed to set up independent market surveillance departments. The SEBI has strengthened its own investigation and enforcement machinery.
- The brokers are required to ensure segregation of client account and own account.
- The capital adequacy norms of 3 percent for individual brokers and 6 percent for corporate brokers introduced.
- Both the brokers and sub-brokers have been brought within the regulatory fold for the first time now; and the concept of dual registration of stock brokers with the SEBI and the SEs has been introduced. The total number of registered brokers and sub-brokers was 8746 at the end of March 1996, of which 1917 were corporate members.
- Penal action can now be taken directly by the SEBI against any member of a stock exchange for violation of any provision of the SEBI Act.
- It has been made mandatory for the stock brokers to disclose the transaction price and brokerage separately in the contract notes issued by them to their clients.
- The daily margin and additional margin for volatile scrips are now levied on a weekly and marked-to-market basis.

- The trading hours in almost all the SEs have now been increased from 2 to 6 hours per day.
- Compulsory audit of the brokers' books and filing of the audit reports with the SEBI has now been made mandatory.
- A system of market making in less liquid scrips on selected SEs has been introduced.
- Insider trading has been prohibited and such trading has been made a criminal offence punishable in accordance with the provisions of the SEBI Act.
- In order to facilitate execution of large trades without impacting the market, the stock exchanges were allowed to provide a separate trading window for block deals subject to certain conditions. BSE and NSE activated this window with effect from 14 November, 2005.
- There is a time gap of about 4–5 days between the crediting of securities to a beneficiary owner's account and the commencement of trading. The time gap was utilised by a few investors to indulge in off-market trades prior to the commencement of trading. In order to prevent such transactions, SEBI advised depositories that, in case of IPOs, the ISINs of securities should be activated only on the date of commencement of trading on the stock exchanges
- Following recommendations of the Jagdish Capoor Committee, it was decided to resume registration under the MAPIN regulations in phases and obtain the unique identification number (UIN) with biometric impression for a trade order value of ₹5 lakh and above. For trade order of value less than ₹5 lakh, a choice is given to the investors (natural persons) to provide either the permanent account number (PAN) of the income tax department or UIN obtained under MAPIN. Pending implementation of the above decision, PAN has been made compulsory for all categories of investors for opening a demat account with effect from 1 April, 2006. The existing demat account holders are required to submit details of PAN by 30 September, 2006.
- In order to streamline the settlement system, consistent with IOSCO recommendations, transactions executed on the stock exchanges would be necessarily settled through the clearing corporation/clearing house of the stock exchanges. The earlier practice of hand delivery bargains/delivery versus payment (DvP) was discontinued with effect from 19 September, 2005. On the basis of information as regards connectivity of companies provided by the depositories, stock exchanges were advised to shift the shares of certain companies from trade-for-trade segment to rolling settlement, subject to their having at least 50 percent of non-promoter holdings in demat mode as per clause 35 of the listing agreement.
- It was decided to update the applicable VaR margins in the cash market at least five times in a day instead of only at the end of the trading day and then apply it to the open positions for the subsequent trading day, as practised in the derivatives market.
- In order to further strengthen know your client (KYC) norms in the cash market and to generate a reliable audit trail, PAN was made mandatory for all transactions in the cash market with effect from 1 January, 2007.
- A large number of representations were received from investors relating to transfer of securities from beneficiary owners' (BOs) account without proper authorisation. Accordingly, the DPs were instructed to put in place adequate safeguards.
- Procedure for reintroduction of derivatives contracts and modified position limits were reviewed by the Secondary Market Advisory Committee (SMAC). Further, based on a decision taken by SEBI board, Derivatives Market Review Committee was set up to carry out a comprehensive review of developments and to suggest future directions for derivatives market in India.

- According to the SEBI guidelines dated 12 December, 2003, every mutual fund scheme should have a minimum of 20 investors and holding of a single investor should not be more than 25 percent of the corpus.
- SEBI clarified that this stipulation is applicable at the portfolio level. Moreover, if there is a breach of 25 percent limit by an investor over the quarter, a rebalancing period of 1 month would be allowed.
- In order to facilitate the unit holders to claim tax benefit associated with the payment of Securities Transaction Tax (STT), it was decided to allow mutual funds to share the unique client code of their schemes/plans with their unit holders.
- Mutual funds were permitted to invest in ADRs, GDRs and foreign securities. In case disclosures to this effect were not made in the offer document, all mutual funds were advised to send a written communication to the investors about the proposed investment.
- Following the Finance Bill 2006–2007 and subsequent raising of limit by RBI, the maximum ceiling for individual mutual funds to invest in ADRs/GDRs issued by Indian companies, equity of overseas companies listed on recognised stock exchanges overseas and rated debt securities was raised from USD 50 to USD 100 million. Subsequently, the limit was further raised to USD 150 million. Mutual funds were also advised to appoint a dedicated fund manager for making such investments.
- In view of the difficulties faced by mutual funds, the time limit for uploading the net asset value (NAV) on the AMFI website was extended from 8 p.m. to 9 p.m.
- SEBI board approved the draft guidelines for real estate mutual funds (REMFs). REMF means a scheme of a mutual fund which has investment objective to invest directly or indirectly in real estate property and shall be governed by the provisions and guidelines under SEBI (Mutual Funds) Regulations.
- Venture Capital Funds (VCFs) allowed investing in unlisted companies, to finance turnaround companies, and to provide loans.
- Implementation of T + 3 rolling settlement for all listed securities across the exchanges from 2 April, 2002 and to move to T + 2 system on 1 April, 2003.
- Introduction of scientific model for risk management based on VaR.
- Introduction of Electronic Data Information Filing and Retrieval (EDIFAR) System to facilitate electronic filing of certain documents/statements by the listed companies and their immediate disclosure to the market participants.
- Launch of Securities Market Awareness Campaign.
- Introduction of rating corporate governance on the principles of wealth creation, wealth management and wealth sharing.
- Introduction of straight through processing (STP) for the securities transaction.
- Implementation of a comprehensive risk management system for mutual funds.
- Introduction of the dual fungibility of ADRs and GDRs.
- Establishment of the Central Listing Authority (CLA).
- Issuance of necessary guidelines/circulars for corporatisation and demutualisation of stock exchanges.
- Introduction of the trading of government securities on the stock exchange.
- Posting all the orders passed by the Securities Appellate Tribunal (SAT) and the board on the SEBI website so as to bring in regulatory transparency.

- Introducing the consultative process on policy formulation by putting all reports of committees and draft regulations on the SEBI website for seeking comments, suggestions and opinions from public.
- Issuance of guidelines on delisting of securities from the stock exchanges.
- Establishment of inter-depository transfer through on-line connectivity between CDSL and NSDL.
- Announcement of accounting standards and disclosure practices of the Indian companies by ICAI in consultation with SEBI in accordance with international accounting standards.
- Expansion of the derivatives products basket.
- Introduction of benchmarking of all the mutual funds schemes to facilitate the understanding of the investors about the performance of the funds.
- Introduction of nomination facility for the unit holders of mutual funds.
- Simplification of documentation procedure for FII registration and reduction of registration fee for FIIS.
- Memoranda of Understanding (MoUs) for cooperation and information sharing were signed with international regulators such as Securities and Finance Commission of Mauritius and Securities and Exchange Commission of Sri Lanka.
- The complaints received by the SEBI are categorised in five types:
  - Type I: Non-receipt of refund orders/allotment letters/stock invests.
  - Type II: Non-receipt of dividend.
  - Type III: Non-receipt of share certificates/bonus shares.
  - Type IV: Non-receipt of debenture certificates/interest on debentures/redemption amount of debentures/interest on delayed payment of interest.
  - Type V: Non-receipt of annual reports, rights issue forms/interest on delayed receipt of refund orders/ dividends.
- Disclosures should be made as reasonably soon as possible but within a timeframe of 24 hours of the occurrence of the event. However, disclosures of the outcome of board meetings have to be made within 30 minutes of the closure of such meetings.
- In order to enable more listed issuers to raise further capital using the fast-track route, the requirement of market capitalisation of the public shareholding of the issuer has been reduced from ₹3000 crore to ₹1000 crore in case of further public offers (FPOs) and to ₹250 crore in case of rights issues.
- With the objective of restricting access to capital markets by such wilful defaulters[4], the following proposals have been approved by the Board:
  - No issuer shall make a public issue of equity securities/debt securities/non-convertible redeemable preference shares, if the issuer company or its promoter or its director is in the list of wilful defaulters. However, the company can come out with a rights issue and can raise funds from qualified institutional buyers subject to adequate disclosures and certain restrictions.
  - Any company or its promoter or its director categorised as wilful defaulter may not be allowed to take control over another listed entity. However, if a listed company or its promoter or its director is categorised as wilful defaulter, and there is a takeover offer with respect to the listed company, it may be allowed to make a competing offer for the listed company in accordance with SEBI takeover regulations.

[4]The Master Circular issued by the Reserve Bank of India defines the term 'wilful default' to occur if the 'unit' has, *inter alia*, defaulted in meeting its payment obligations or not utilised the finance from the lender for the specific purposes for which it was availed or has siphoned off the funds. Further, the Master Circular defines the term 'unit' to include individuals, juristic persons and all other forms of business enterprises, whether incorporated or not.

- The criteria for determining a 'fit and proper person' in the SEBI Regulations is being amended to include the provision that no fresh registration shall be granted to any entity if the entity or its promoters or its directors or key managerial personnel, are included in the list of wilful defaulters.
- Certain measures have been introduced for reducing the post-issue timeline for listing from existing T + 12 to T + 6 days, increasing the reach of retail investors and reducing the costs involved in a public issue of equity shares and convertibles.
- SEBI monitored the compliance of composition of boards of the listed entities to ensure that they had appointed the requisite number of independent directors and women directors.
- Introduction of exchange traded cash settled interest rate futures (IRF) on 6-Year and 13-Year Government of India security.
- Framework for setting up of new exchange or separate platform of existing stock exchange having nationwide terminals for SME. As per the framework, market making has been made mandatory in respect of all scrips listed and traded on SME exchange.
- Stock exchanges are permitted to introduce option contracts on Sensex and Nifty with tenure up to 5 years subject to the condition that (a) there are eight semi-annual contracts of the cycle June/December in sequence to three serial monthly contracts and three quarterly contracts of the cycle March/June/September/December, and (b) the exchange has in place the appropriate risk management framework for such derivative contracts.
- Initiation of call auction mechanism in pre-open session. To begin with, pre-open session should be introduced on a pilot basis by BSE and NSE for the scrips forming part of Sensex and Nifty. In case of any change in the composition of Sensex and Nifty, pre-open session should be introduced for such incoming scrips. Pre-open session should also continue for the scrips moving out of Sensex and Nifty, though they will not be reckoned for the computation of the index.
- Decision to provide flexibility to stock exchanges to offer either European style or American style stock options. After opting for a particular style of exercise, a stock exchange shall offer option contracts of the same style on all eligible stocks. Also, all other contract specifications, including risk management framework applicable for American style stock options, shall apply to European style stock options. Any modification shall require prior approval of SEBI.
- Government increased the current limit of FII investment in Government Securities by US $5 billion. It has been decided that above incremental limits, shall be allocated to the market participants through bidding process and first-come-first-serve process. The unutilized limit from past allocations shall also be allocated to the market participants through bidding process and first-come-first-serve process.
- It has been decided to permit stock exchanges to introduce derivative contracts (futures and options) on foreign stock indices in the equity derivatives segment.
- It has been decided to introduce futures on 91-day Government of India treasury-bill (T-bill) on currency derivatives segment of stock exchanges.
- In July 2012, SEBI decided to redress to complaints against stock exchanges and depositories through SCORES and they are advised to see their pending complaints in the website at http://scores.gov.in/admin.
- On the same month, the facility of e-voting by shareholders was enabled.
- In November 2012, SEBI permitted mutual funds to participate in credit default swap market.

- To strengthen capital market, on December 13, Government of India notified Rajiv Gandhi equity saving scheme as a tax saving scheme.
- Trading through periodic call auction was introduced for illiquid scrips in equity market and pre-open session was extended to all other scrips.
- Foreign instructional investors' were permitted to offer government securities, corporate bonds, cash and other foreign securities as their collateral in the transaction in F&O segment.
- SEBI rationalized the debt limits by merging the categories of government debt old (USD 10 billion) and government debt long term (USD 15 billion) into a single category named 'government debt' and prescribing the combined limit of USD 25 billion, equivalent to 124,432 crore.
- SEBI mandated the systemically important Clearing Corporations—Indian Clearing Corporation Ltd., MCX-SX Clearing Corporation Ltd. and National Securities Clearing Corporation Ltd. and Depositories—CDSL and NSDL, to comply with the PFMIs prescribed by CPSS and IOSCO.
- SEBI created centralized database regarding corporate bonds which is available in demat form for public dissemination. Both the depositories, *viz.*, NSDL and CDSL shall, jointly, create, host, maintain and disseminate the centralized database of corporate bonds/debentures, which are available in demat form.
- In November 2013, SEBI permitted FIIs and QFIs to invest in the credit-enhanced bonds, up to a limit of USD 5 billion within the overall limit of USD 51 billion earmarked for corporate debt.
- SEBI mandated that all the trades in securitised debt instruments (listed or unlisted) by mutual funds, FIIs/sub-accounts/QFIs/FPIs, AIFs, FVCIs and portfolio managers shall be reported on the trade reporting platform of either NSE, BSE or MCX-SX within 15 minutes of the trade with effect from 1 April, 2014.
- SEBI mandated that all OTC trades in corporate bonds shall be reported only on any one of the reporting platform provided in the debt segment of stock exchanges, *viz*., NSE, BSE and MCX-SX within 15 minutes of the trade.
- Base issue size, minimum subscription, retention of over-subscription limit and further disclosures in the prospectus for public issue of debt securities were specified. FPIs were permitted to invest on repatriation basis, in non-convertible/redeemable preference shares or debentures issued by an Indian company listed on recognized stock exchanges in India.
- In consultation with RBI, SEBI revised the position limits for currency derivatives contracts and permitted FPIs to trade in the currency derivatives segment of stock exchanges.
- On basis of recommendation of Depository Systems Review Committee, SEBI issued risk management policy framework for the depositories in January 2015.
- With a view to increase participation, resident individual investors were allowed to open a trading account and demat account by filling up a simplified *Saral* account opening form.

7.2.8 Corporate Governance and SEBI

The corporate governance systems should be in place to avoid corporate misconduct and ensure discipline. The corporate governance institutions comprise both formal and informal rules (the latter notably include a country's generally accepted business practices and ethical standards, though these are normally unwritten) that are established among private actors as well as by the state or other public authorities. Some of the key institutions and actors are corporate law, securities laws, securities regulations, listing requirements, judicial system, professional associations, business associations, financial accounting standards, stock tendering

requirements, proscription of self-dealing, public disclosure, auditing standards and so on. These institutions and actors impose three kinds of disciplines on the corporates: (i) self-discipline, (ii) market discipline, and (iii) regulatory discipline. Good corporate governance requires all three disciplines to ensure the required checks and balances.

Indian market has developed a yardstick in the form of 'Governance and Value Creation Rating (GVC)' architectured by CRISIL. The GVC approach stems from the belief that good governance, over and beyond its process aspects, is fundamentally a sustainability issue—good governance should result in the creation and fair distribution of tangible benefits. It is based on the following premises: (i) The strength of stakeholder relationships can add to/impede future wealth creation by the corporation, (ii) governance processes must be, such that wealth created is evenly distributed across all classes of stakeholders, (iii) management quality must be such that it is able to adopt the above two to match the dynamics of the business environment, and (iv) all these impact stability of future wealth creation. As the regulator for the securities market, the Securities and Exchange Board of India (SEBI) has been focussing on the following areas to improve corporate governance: (i) ensuring timely disclosure of relevant information, (ii) providing an efficient and effective market system, (iii) demonstrating reliable and effective enforcement, and (iv) enabling the highest standards of governance.

Recognising the rising concern of corporate governance issue, SEBI has taken various steps for improvement in disclosures which are the control tools to resolve the conflicts between managers and shareholders. SEBI had constituted a committee on 7 May, 1999 under the chairmanship of Shri Kumarmangalam Birla, then member of the SEBI Board 'to promote and raise the standards of corporate governance'. Based on the recommendations of this committee, a new clause 49 was incorporated in the stock exchange listing agreements. In this regard, SEBI has constituted another committee on corporate governance under the chairmanship of Shri Narayan Murthy to make an extensive recommendation for better corporate governance in the Indian corporate sector. Based on this report a separate section on corporate governance in the annual reports of the company has been added.

SEBI has set up a system named Electronic Data Information Filing and Retrieval (EDIFAR). Through this mechanism, all the companies would electronically file the mandatory disclosures to SEBI which will be available for all the investors and public. SEBI's measures such as submission of quarterly compliance reports and company valuation on the lines of the Sarbanes-Oxley Act have enhanced corporate governance. But enforcement continues to be a problem because of limited trained staff and companies not being subjected to substantial fines or legal sanctions. SEBI's efforts at creating heightened awareness of full disclosure and transparency have succeeded only partially. This necessitates shifting to National Listing Authority, empowering investors on the lines of the United States class action, using information technology and public disclosure aggressively to improve surveillance, adopting a more aggressive pro-competitive policy, introducing effective and competitive securities lending system and broad-basing derivative markets. SEBI's bill clarified the role of the 'Department of Company Affairs' and acquired the power to debar directors and trace and attach assets of those companies. SEBI's guidelines (effective March 2000) started Internet brooking on Indian securities to enhance transparency and reduce infirmities in Indian capital market transactions.

SEBI's Role on Satyam and Sahara Scandals

Corporate governance mechanism refers to the process and rules under which a company is managed on the behalf of shareholders and other stakeholders. In other words, corporate governance policy of a company refers to the structure, policy and guidelines by which a company manages its corporate decision-making process in the interest of various stake holders. SEBI plays a significant role to ensure a better corporate governance system in every company operating in India. SEBI is authorised to take actions on those companies which are not following the corporate governance standards recommended by SEBI and Companies Act 2013. In this context over the years many frauds and lapses in the corporate governance systems have been detected in India. The prominent cases are Satyam and Sahara. The following section briefly highlights these cases.

Case of Satyam

According to SEBI, loopholes in the company's accounting system and instructions from the company's founder were used to record fake orders and invoices from sometimes made-up clients. From April 2003 through to September 2008, SEBI alleges that more than 7,500 fake invoices were created. The orders were used to illustrate the origin of the company's ballooning bank balances. In the case of Satyam, the steps taken by SEBI are as follows: Satyam Computer's founder B. Ramalinga Raju and four others are debarred from markets for 14 years and asked them to return ₹1,849 crore worth of unlawful gains with interest. The money needs to be deposited with SEBI within 45 days, while interest would be levied at 12 percent per annum with effect from January 7, 2009—the day this mega-scam came to the light through a letter written by Raju himself. The company was acquired by Tech Mahindra Ltd, then renamed as Mahindra Satyam and eventually it was merged with Tech Mahindra.

Case of Sahara

After RBI debarred Sahara India Financial Corporation from raising fresh deposits in 2008, to get access to the public fund, Sahara decided to issue optionally fully convertible debentures (OFCDs). The OFCD holders can become shareholders of the company if they chose to do so. Sahara decided to issue OFCDs by floating two companies—Sahara India Real Estate Corporation (SIREC) and Sahara Housing Investment Corporation (SHIC). It was the Registrar of Companies (ROC) that needed to clear these investment vehicles. Both the companies had negligible net worth. SIREC had an equity capital of only ₹10 lakh and a negative net worth at the time of issuance, while the net worth of SHIC was around ₹10 lakh. But both the companies planned to raise ₹20,000 crores each. With this negligible amount of net worth, the ROC allowed the Sahara Group companies to go ahead with the proposal. Apart from this, another law was flouted by Sahara in issuing these OFCDs, which it calls private placement. But the private placements are restricted to 49 shareholders only. Any company seeking money from more than 50 persons has to take the approval of SEBI in doing so, in which case the company would have to make all the disclosures required as per SEBI norms. The Sahara group had sought money from nearly 30 million investors. Apart from the size and number of investors, another deliberate error was keeping the issue open ended; ideally, such issues should be closed within 6 weeks. In fact a Sahara group company kept an issue of ₹17,250 crores open for 10 years.

Further, when Sahara decided to tap the stock markets to raise money through Sahara Prime City, the company had to file a Red Herring Prospectus and disclose working and financials of other group companies. At that point of time SEBI spotted SIREC and SHIC and found that the money raised through OFCDs was disguised as private placements. SEBI found out that even though the Sahara group companies collected money they did not have proper records of the identity of its investors. This was considered as fraud and money laundering case. In this regard, SEBI has informed about these wrong doings made by Sahara. Further, Sahara has been directed by court to deposit ₹24,000 crores to SEBI, which will be further distributed to the people from whom the money has been collected. Mr.Subrata Roy, the chief of Sahara group, was sent to jail. The case is still going on in the Supreme Court. But it is the SEBI which has identified the loopholes in the corporate governance system of the company and tried to take proper action against it.

7.3 INSURANCE REGULATORY DEVELOPMENT AUTHORITY (IRDA)

LO 2
Understand Insurance Regulatory Development Authority

Insurance Regulatory and Development Authority (IRDA) is a statutory body set up for protecting the interests of the policyholders and regulating, promoting and ensuring orderly growth of the insurance industry in India. With the enactment of the Insurance Regulatory and Development Authority (IRDA) Act, 1999, Insurance Regulatory and Development Authority was formed as an autonomous regulatory body on 19 April, 2000. Since 2000, IRDA has been serving as an independent regulatory authority for the insurance industry and to create confidence among the policyholders in the financial viability of the insurance companies. IRDA has been playing a pivotal role in the insurance sector with a fundamental commitment to discharge its mandate for orderly growth of insurance sector. As on 31 March, 2015, there are 24 life insurers (one public sector and 23 private sectors) and 29 non-life insurers (four public insurers, two specialized insurers, one reinsurer and 22 private insurers including five standalone health insurers) operating in India.

7.3.1 Structure and Statutory Functions of IRDA

IRDA is a 10 member body appointed by the Government of India consisting of the chairman, five whole-time members, and four part-time members. As per Section 25 of the IRDA Act, 1999, the Insurance Advisory Committee (IAC) advices IRDA in framing the regulations for insurance companies. IAC consists of not more than 25 members excluding the *ex-officio* members. IRDA has played a very important role in the growth and development of the sector by protecting policyholders' interests; registering and regulating insurance companies; licensing and establishing norms for insurance companies, regulating and overseeing premium rates and terms of non-life insurance covers; specifying financial reporting norms, regulating investment of policyholders' funds and ensuring the maintenance of solvency margin by insurance companies; ensuring insurance coverage in rural areas and of vulnerable sections of society; promoting professional organisations connected with insurance and all other allied and development functions. The statutory functions of IRDA are as follows:

- Issue to the applicant a certificate of registration and renew, modify, withdraw, suspend or cancel such registration
- Protection of the interests of the policyholders in matters concerning assigning of policy, nomination by policy holders, insurable interest, settlement of insurance claim, surrender value of policy and other terms and conditions of contracts of insurance
- Specifying requisite qualifications, code of conduct, and practical training for intermediaries or insurance intermediaries and agents
- Specifying the code of conduct for surveyors and loss assessors
- Promoting efficiency in the conduct of insurance business
- Promoting and regulating professional organisations connected with insurance and reinsurance business
- Levying fees and other charges for carrying out the purposes of the Act
- Calling for information from, undertaking inspection of, conducting enquiries and investigations including audit of the insurers, intermediaries, insurance intermediaries and other organisations connected with the insurance business
- Control and regulation of rates, advantages, terms and conditions that may be offered by the insurers in respect of general insurance business not so controlled and regulated by the Tariff Advisory Committee under Section 64 U of the Insurance Act 1938 (4 of 1938)
- Specifying the form and manner in which books of accounts shall be maintained and statements of accounts shall be rendered by insurers and other insurance intermediaries
- Regulating investment of funds by insurance companies
- Regulating maintenance of margin of solvency
- Adjudication of disputes between insurers and intermediaries or insurance intermediaries
- Supervising the functioning of the Tariff Advisory Committee
- Specifying the percentage of the premium income of the insurer to finance schemes for promoting and regulating professional organisations referred to in clause (f)
- Specifying the percentage of life insurance business and general insurance business to be undertaken by the insurers in the rural and social sector

7.3.2 Major Initiatives Taken by IRDA[5]

- Since 2002, the insurance industry has witnessed numerous changes such as introduction of new type of products such as micro insurance products, ULIP products, health insurance and so on. Also, new categories of distribution channels such as corporate agents, insurance brokers, web-aggregators and insurance marketing firms (IMF) have been permitted to carry out insurance distribution activities.
- The framework of regulations to protect the interests of prospects and policyholders are contained in the IRDA (Protection of Policyholders' Interests) Regulations, 2002. The Regulations contain procedure to be followed at the point of sale; disclosures to be made in life insurance and general insurance policy document, claim procedure in respect of life insurance and general insurance policy; and turn around time (TATs) for various functions under policy servicing.

[5]http://financialservices.gov.in/insurance, IRDA, Annual Reports, Various Issues.

- The Indian Market Terrorism Risk Insurance Pool was formed as an initiative by all the non-life insurance companies in India in April 2002, after terrorism cover was withdrawn by international reinsurers post 9/11.
- Insurance Regulatory and Development Authority (IRDA) has issued guidelines to implement the portability of health insurance policies amongst non-life insurance companies with effect from 1.10.2011. The health insurance policy holder by virtue of the said guidelines can, at the time of renewal, switch (i) from one insurance company to another insurance company of his choice, or (ii) from one insurance plan to another insurance plan with the same insurance company. By the process, the policy holder will not lose the credits gained in terms of waiting periods for pre-existing conditions, time-bound exclusions, and so on. The health insurance policy holder can at the time of renewal of his/her policies can shift to another insurance company for a similar product, if he is not satisfied with the present insurance company for any reason, without losing the credits gained, if renewed with the existing company. Thus 'portability' helps to have a level playing field for all insurance companies and the customer can choose and compare benefits across products and Companies. IRDA has also provided a portability portal facilitating easy data transfer between the insurance companies.
- During 2009–10, the IRDA aligned the definition of 'infrastructure facility' with that of the Reserve Bank of India (RBI) thereby creating more room for the insurers to invest in infrastructure sector. The Authority has also relaxed the ceiling of investments in infrastructure to 20 percent in a 'single' investee company as against 10 percent earlier. The limit is applicable to the combination of both debt and equity taken together without sub-ceilings in instruments satisfying certain criteria. An additional exposure of 5 percent has been permitted in 'debt' alone with prior approval of the respective insurer's investment committee.
- Further strengthening on the risk management structure, IRDA has issued guidelines on the scope for 'internal and concurrent audit' for investment operations of insurance companies to monitor investment of both traditional and unit-linked portfolio, at a closer level with the aim of mitigating risk. Similar, stipulations are also applicable to non-life insurance companies.
- One of the main objectives of promoting financial inclusion packages is to economically empower those sections of society who are otherwise denied access to financial services, by providing banking and credit services thereby focusing on bridging the rural credit gap. The banking sector is focusing on financial inclusion on a priority basis. Vulnerability to various risk factors is one of the fundamental attributes of these sections of the society. Lack of protective elements may, thus, not serve the objective of promoting financial inclusion packages as the targeted sections may fall back into the clutches of poverty in the event of unforeseen contingencies. Hence, to provide a hedge against these unforeseen risks, micro insurance is widely accepted as one of the essential ingredients of financial inclusion packages. Micro insurance regulations issued by IRDA have provided a fillip in propagating micro insurance as a conceptual issue. The micro insurance regulations have been made effective from 2005. These regulations are in addition to the obligations for rural and social sector business to be done by all insurers on an annual basis.
- The stipulations on disclosures to be made by insurance companies have been strengthened by the authority to fill the gap in availability of information in the public domain. These disclosures are required to be made through (i) publication in newspapers, and (ii) hosting on the respective company websites, effective from the period ended 31 March, 2010. This initiative has placed the insurance companies, which are presently not publicly listed entities, at par with the listed entities in the corporate world in

terms of public disclosures. Listed corporate entities are governed by the terms of the listing agreement, which amongst other things, provides for public disclosure of performance on a quarterly basis.

- The non-life insurance companies have been mandated to submit the financial condition report annually, effective 31 March, 2010 for the said financial year in the prescribed format. The objective of the FCR is to facilitate analysis of the current block of business as on the valuation date to bring out clearly the challenges the insurers face in terms of meeting the solvency requirements, their profitability and other risks, *viz.*, morbidity, liquidity, credit and expense, investment return, asset-liability mismatch and so on
- The Consumer Affairs Department of IRDA handles policyholder grievances, apart from carrying out awareness campaigns on insurance. The Grievance Cell looks into the complaints from policyholders against life and non-life insurance companies. Prospects and policyholders are advised to first file their complaints with the respective insurance companies. The Grievance Cell of IRDA facilitates redressal by taking up the complaints with the company. Where required, investigations and enquiries are carried out by IRDA. Recently, IRDA has provided an alternative channel for prospects and policyholders to lodge complaints with the Grievance Cell by launching the IRDA Grievance Call Centre (IGCC). The IGCC receives and registers complaints through a toll free number. Complainants can also track the status of their complaints through IGCC. The authority has also implemented the Integrated Grievance Management System (IGMS) through automation of the Grievance Cell for on-line registration of complaints which enables on-line verification of status and redressal. Further, under the corporate governance guidelines, the authority has also mandated that insurers shall have in place the Policyholder Protection Committee. In order to facilitate customers to reach the insurers for their grievances, IRDAI has provided channels for customers to raise their grievances against insurers. These include online grievance portal www.igms.irda.gov.in and a toll free grievance call centre (155255). The complaints registered through these channels also are taken up with insurers for resolution.
- Guidelines have been issued by the authority on variable insurance products (VIP) on 23 November 2010. Under the guidelines, all VIPs shall only be offered under non-unit linked platform either as participating or non-participating products and shall not be permitted under unit-linked platform. The guidelines provide that benefits under these products would be payable either on death or maturity. The guidelines further require that only regular premium products with minimum policy and payment terms of 5 years are allowed. Single premium, limited premium and group insurance contracts are not allowed under these products.
- Guidelines on trade credit insurance policies were issued by the authority, which are effective from 13 December, 2010, with a view to standardizing the features of these products. All insurers are required to revise their products in line with the File and Use guidelines and the trade credit insurance guidelines. These guidelines specify that a policyholder should necessarily be a supplier of goods and services and his coverage under the policy should be towards loss incurred due to non-receipt of trade receivables. The credit cover can only be issued on whole turnover basis covering all buyers.
- Corporate governance guidelines have been put in place for insurance companies. As per the stipulations, insurance companies were required to be compliant with the guidelines effective from 1 April, 2010. The guidelines provide for the structure, responsibilities and functions of the board of directors and the senior management of the company. The guidelines cover the major structural elements of an insurance company, including governance structure, board of directors, control functions, senior management—CEO and other senior functionaries, role of appointed actuaries, external audit—appointment of statutory

auditors, disclosures, outsourcing, relationship with stakeholders, interaction with the supervisor, and the whistle blowing policy. Insurers are required to have a minimum of two independent directors on their board as long as they are unlisted, and all the directors must meet the 'fit and proper' criteria. The guidelines have further laid down stipulations on formation of mandatory committees—Audit; Investment; Risk Management; Asset Liability Management (in case of life insurance companies); Policyholder Protection; and optional committees—Remuneration; Nomination and Ethics.

- IRDAI is playing an active role as a member of Core Committee of National Centre for Financial Education, an institution, jointly formed by all the financial sector regulators in India for implementation of the National Strategy for Financial Education (NSFE), and supporting the initiatives of NCFE, *viz.*, National Test for Assessment of Financial Literacy, launching of NCFE web portal and in organizing national survey to measure financial awareness and so on
- In a press release on 4 September, 2014, IRDAI while cautioning public about spurious calls informed the public about the new patterns of spurious calls reported and released audio clips on spurious calls.
- During the FY 2014–15, IRDAI has taken a number of consumer education initiatives under the *Bima Bemisaal* brand. In an attempt to increase the insurance awareness at grass root level, IRDAI mandated all insurers to have board-approved insurance awareness policy.
- The IRDA (Non-Linked Product) Regulations, 2013 and IRDA (Linked Product) Regulations, 2013 governing non-linked and linked life insurance products are aimed at ensuring consistency in terms of products, respectively, and features offered by the insurers and bringing in transparency in terms of benefit payouts, thereby, enabling the customers to choose the right policy.
- The Insurance Laws (Amendment) Act, 2015 specifies a level of solvency margin known as control level of solvency, on the breach of which, the authority shall direct the insurer to submit a financial plan suggesting a plan of action to correct the deficiency within a specified period not exceeding 6 months.
- The regulations also require that every insurer should maintain the maximum possible retention commensurate with its financial strength and volume of business.

7.4 PENSION FUND AND REGULATORY DEVELOPMENT AUTHORITY (PFRDA)

LO 2

Discuss in detail Pension Fund and Regulatory Development Authority

Pension reforms in most countries initially are driven by the budgetary constraints of supporting a public pension system. The long-term problems of ageing of the population and social change, including breakdown of traditional family support for old-age income security, are equally important factors. However, in India, in the absence of a country-wide social security system (formal pension coverage being about 12 percent of the working population), while the ageing and social change are important considerations for introducing pension reforms in the unorganised sector, fiscal stress of the defined benefit pension system was the major factor driving pension reforms for employees in the organized sector. The Pension Fund and Regulatory Development Authority (PFRDA) has been established to establish and promote pension system for all the citizens through guided development and prudent regulation of the pension industry, with focus on institution-building, capacity development and enabling framework for innovations in products, schemes and programmes across all stakeholders and market participants, in the best interest of the subscribers and the pension system. The

Pension Fund Regulatory and Development Authority has been established in the year 2003. The body was set up with an aim to promote, regulate and develop the pension sector in the country.

7.4.1 Structure and Statutory Functions of PFRDA

The PFRDA board consists of seven members including chairman, three whole-time members and three part-time members. According to Section 14 of PFRDA Act, 2013 the functions of PFRDA are to regulate, promote and ensure the orderly growth of the National Pension System (NPS) and pension schemes and to protect the interest of subscribers of such system and scheme. The statutory functions of PFRDA are as follows:

- Regulation of intermediaries and National Pension System (NPS)
- Registration and regulation of pension schemes and NPS
- Approval of pension schemes, the terms and conditions thereof, and laying down norms for the management of corpus of the pension funds including investment guidelines under such scheme
- Reporting the exit of the subscription from NPS
- Formulating regulations in respect of pension funds, National Pension Trust, Trustee Bank, Central Record Keeping Agency, custodian of securities, point of presence and redressal of subscriber's grievances
- Mechanism for redressal of grievances of subscribers
- Providing the professional organizations connected with the pension system
- Educating subscribers and the general public on issues relating to pension, retirement and related issues, and training of intermediaries
- Standardising dissemination of information about performance of pension funds and performance benchmarks

7.4.2 PFRDA and National Pension Scheme (NPS)[6]

- The National Pension Scheme was launched by PFRDA in the year 2003 and thereby extended to all sections of citizens in the year 2009.
- The National Pension Scheme extended thus brought under purview those from the self-employed sector and from the unorganized sector too, on a voluntary basis.
- The passage of the Pension Fund Regulatory and Development Authority (PFRDA) Act, 2013 on 19 September, 2013 and its subsequent notification on 1 February, 2014 marked a major milestone in the history of pension reforms in the country. The Act provides for an overarching mandate to PFRDA to promote and develop an organized and robust pension system in the country that would serve the old-age income needs of the people. PFRDA has the mandate to develop, promote and regulate the pension industry under the umbrella architecture of the National Pension System (NPS). The PFRDA Act, 2013[7] has following features:
  - Establishing a statutory Pension Fund Regulatory and Development Authority (PFRDA) for (a) promoting old age income security by establishing, developing and regulating pension funds, and (b) protecting the interests of subscribers to various schemes of pension funds.

[6]The details about NPS have been explained in Chapter 10 of the book.
[7]PFRDA, Annual Report, 2013–14.

- Empowering PFRDA for (a) regulating the National Pension System and other pension schemes not covered under any other Act; (b) registering and regulating pension funds, the central recordkeeping agency (CRA), points of presence and other market intermediaries associated with pension funds collection, management and distribution; (c) framing investment guidelines for pension funds; and (d) levying a penalty of not more than one crore rupees or five times the amount of profits made or losses avoided, whichever is higher, for violations of various provisions of the PFRDA Act.
- Contravention of the provisions of the PFRDA Act or rules or regulations made, thereunder, is punishable with imprisonment for a term which may extend up to 10 years, or with fine, which may extend to Rupees twenty-five crore or with both by courts.
- Subjecting subordinate legislation to Parliamentary scrutiny.

- PFRDA takes various initiatives from time to time in order to simplify and improve the operational issues in National Pension System (NPS) like new functionality development under NPS architecture, simplification of account opening, withdrawal, grievance management and so on. In this regard, recently much functionalities have been released by the Central Recordkeeping Agency (CRA) to provide the ease of operation for the benefit of subscribers and nodal offices. All these are highlighted as follows:
  - Point of Presence (POPs) were previously allowed to upload the regular monthly contribution in the CRA system only for the subscribers pertaining to their associated corporate. Now, a POP can also upload the contribution for subscribers who have shifted from one of their associated corporate to another associate corporate.
  - The POP can process a subscriber request to transfer funds from Tier II to Tier I account. Such transactions can be processed only for subscribers under All Citizens of India Model or Corporate Sector Model having active Tier I and Tier II accounts, subject to the availability of adequate holdings in the Tier II account. There is no limit (minimum or maximum) on the amount and number of one way switches that can be requested by a subscriber.
  - The POPs can process the 'Voluntary' contributions made by any corporate subscriber even if they are not associated to them.
  - The government subscribers (mandatorily covered under NPS) can also approach their associated nodal office for making additional investment (voluntary contributions) in their PRAN—Tier I account.
  - NPS has a multi-layered grievance redressal mechanism centralised at Central Recordkeeping Agency (CRA) which is easily accessible, simple, quick, fair, responsive and effective. Subscribers have the option of registering grievance/complaints through call centre/interactive voice response system (IVR), web-based interface and physical forms. Subscriber can check the status of the grievance at the CRA website www.cra-nsdl.co.in for the grievances logged in through Central Grievance Monitoring System (CGMS) maintained by CRA or through the call centre by mentioning the token number. Subscriber can also raise a reminder through any one of the modes mentioned above by specifying the original token number issued. If subscriber does not receive any response within thirty (30) days or is not satisfied with the resolution by CRA, subscriber can apply to the Grievance Redressal Cell (GRC) of PFRDA. The grievances are also being entertained directly by PFRDA at the Grievance Redressal Cell (GRC) of PFRDA. The redressal rate is close to 100 percent for PFRDA in the year 2013–14.

SUMMARY

- The SEBI was set up in 1988 through an administrative order, and it became a statutory body in 1992.
- The SEBI is a body of eight members comprising the chairman, three full-time members, one part-time member and two officials of the ministries of the central government dealing with finance and law, and one member from the RBI.
- Its objectives are to protect the investors and to regulate the financial system in order to bring about its healthy development. Self-regulation and regulation by exception are said to be the cornerstones of its policies. It seeks to increase the efficiency of mobilisation and allocation of resources through the securities market.
- It has wide powers to issue rules, regulations, and guidelines in respect of both the primary and secondary securities markets, a wide variety of intermediaries operating in these, markets, *viz*., brokers, merchant bankers, underwriters, bankers to issues, and so on, and certain financial institutions such as mutual funds.
- It is empowered to summon all categories of market intermediaries, to investigate their working, to impose penalty and to initiate prosecution against them.
- The SEBI has issued a large number of regulations in respect of primary and secondary markets, market intermediaries, mutual funds, FIIs, and takeovers and acquisitions.
- The success rate in resolving investor complaints claimed by the SEBI is suspect. The empirical evidence shows that the SEBI has failed to protect the small and individual investor, and to check the unfair, unethical practices in the market.
- The SEBI has created a maze of regulations leading to a very high level of confusion and uncertainty. It has installed 'etatistic control' rather than 'prudential regulation'.
- The SEBI has exhibited a lack of will in taking action against wrong-doers. It has dithered in vital matters, for example, in the carry forward system of trading. It is said to have been more corporate and market-intermediaries—friendly than investor friendly.
- SEBI has imposed major guidelines for pre-issue and post-issue obligations and bonus issues.
- The SEBI ought to be made an autonomous and independent regulatory body which at present is not.
- The SEBI has taken various steps to improve the corporate governance system to avoid corporate misconduct and ensure discipline.
- Insurance Regulatory and Development Authority (IRDA) is a statutory body set up for protecting the interests of the policyholders and regulating, promoting and ensuring orderly growth of the insurance industry in India.
- IRDA is a 10-member body appointed by Government of India consisting of the chairman, five whole-time members, and four part-time members.
- Since 2002, IRDA has taken many initiatives in terms of regulatory measures, introduction of many innovative instruments and institutional setups for the development of insurance industry in India.
- Pension Fund Regulatory and Development Authority was established in the year 2003. The body was set up with an aim to promote, regulate and develop the pension sector in the country.
- The PFRDA board consists of seven members including chairman, three whole-time members and three part-time members.
- PFRDA's major function is to regulate and develop the New Pension Scheme in India.

KEY TERMS

Securities and Exchange Board of India	Pre-issue obligation	Lead merchant banker
Pension Fund Regulatory Development Authority	Post-issue obligation	Insider trading
Insurance Regulatory Development Authority	Bonus issue	Corporate governance

QUESTIONS

1. What is the philosophy underlying the creation of SEBI and explain the constitution of SEBI and how the work of SEBI has been organised?
2. Discuss the objectives, scope and functions of SEBI.
3. What are the policy measures introduced by SEBI during the post-liberalisation period for the development of primary securities market?
4. 'SEBI has played a strong role for the improvement of the secondary market in India'. Comment.
5. What are the different measures taken by SEBI for the development of mutual funds, foreign institutional investors, venture capitalists and the protection of the investors during the period 1992–2003?
6. Critically examine the SEBI's work in India during the liberalisation period.
7. What the major pre- and post-obligations that are imposed by SEBI? Highlight the bonus issue guidelines imposed by SEBI.
8. What are the major initiatives taken by SEBI for better corporate governance in the Indian corporate sector?
9. Explain the structure and statutory functions of IRDA.
10. What are the major initiatives taken by IRDA to develop the insurance sector in India?
11. Explain the structure and statutory functions of PFRDA.
12. What are the major initiatives taken by PFRDA to pension sector in India?

Part 3

Banking Institutions

Banks are the most important financial intermediaries in all the countries as they play a significant role in the payment mechanism. Indian economy is a bank-dominated economy as banks are the major source of finance for both corporates and individuals. This part is devoted to analysing the functioning of the two types of banking institutions in India, namely, commercial banks and co-operative banks. First, it discusses the theory of commercial banking operations, special role of commercial banks, services provided by commercial banks, trends, growth, structure and various emerging issues in respect of assets and liabilities of commercial banks, international banking, retail banking and risk management in commercial banks. Further, other chapter describes the structure, features, growth and weakness of co-operative banks in India.

CHAPTERS

8. Commercial Banks

9. Co-operative Banks

Commercial Banks

8
CHAPTER

Learning Objectives

- **LO 1** Identify the basis for operation of commercial banks in India and services offered by them
- **LO 2** Know the two financial statements through which the financial data on commercial banks are presented
- **LO 3** Explain how the bank's performances are measured
- **LO 4** Illustrate retail banking
- **LO 5** Understand various types of international banking and the risks associated with it
- **LO 6** Describe other issues in commercial banking along with its structure and growth in India
- **LO 7** Determine the trends in all liabilities and all assets of commercial banks in India
- **LO 8** Show how commercial banks perform in India and what has been their Capital Adequacy Ratio
- **LO 9** Discuss the growth of Regional Rural Banks and Basel norms for banking supervision in India
- **LO 10** Summarise risk management in banking

8.1 INTRODUCTION

Commercial banks are the oldest, biggest and fastest growing financial intermediaries in India. They are also the most important depositories of public saving and the most important disbursers of finance. Commercial banking in India is a unique system, the like of which exists nowhere in the world. The truth of this statement becomes clear as one studies the philosophy and approaches that have contributed to the evolution of the banking policy, programmes and operations in India. This however, is too big a subject to be discussed here in detail. We will therefore, confine ourselves to presenting only an outline of the said philosophy and approaches, and discussing the actual working of banks in detail.

The banking system in India works under the constraints that go with social control and public ownership. The public ownership of banks has been achieved in three stages: 1955, July 1969 and April 1980. Not only the public sector banks but also the private sector and foreign banks are required to meet targets in respect of sectoral deployment of credit, regional distribution of branches and regional credit–deposit ratios. The operations of banks have been determined by Lead Bank Scheme, Differential Rate of Interest Scheme, Credit Authorisation Scheme, inventory norms and lending systems prescribed by the authorities, the formulation of the credit plans and Service Area Approach.

8.2 THEORETICAL BASIS OF BANKING OPERATIONS

LO 1

Identify the basis for operation of commercial banks in India and services offered by them

Commercial banks ordinarily are simple business or commercial concerns which provide various types of financial services to customers in return for payments in one form or another, such as interest, discounts, fees, commission and so on. Their objective is to make profits. However, what distinguishes them from other business concerns (financial as well as manufacturing) is the degree to which they have to balance the principle of profit maximisation with certain other principles. In India especially, banks are required to modify their performance in profit-making if that clashes with their obligations in such areas as social welfare, social justice and promotion of regional balance in development. In any case, compared to other business concerns, banks in general have to pay much more attention to *balancing profitability with liquidity*. It is true that all business concerns face liquidity constraint in various areas of their decision-making and, therefore, they have to devote considerable attention to liquidity management. But with banks, the need for maintenance of liquidity is much greater because of the nature of their liabilities. Banks deal in other people's money, a substantial part of which is repayable on demand. That is why for banks, unlike other business concerns, liquidity management is as important as profitability management. This is reflected in the management and control of reserves of commercial banks.

1. **Management of Reserves:** The banks are expected to hold voluntarily a part of their deposits in the form of ready cash which is known as cash reserves; and the ratio of cash reserves to deposits is known as the (cash) reserve ratio. As banks are likely to be tempted not to hold adequate amounts of reserves if they are left to guide themselves on this point, and since the temptation may have extremely destabilising effect on the economy in general, the central bank in every country is empowered to prescribe the reserve ratio that all banks must maintain. The central bank also undertakes, as the lender of last resort, to supply reserves to banks in times of genuine difficulties. It should be clear that the function of the legal reserve requirements is two-fold: (a) to make deposits safe and liquid, and (b) to enable the central bank to control the amount of checking deposits or bank money which the banks can create. Since the banks are required to maintain a fraction of their deposit liabilities as reserves, the modern banking system is also known as the fractional reserve banking.
2. **Creation of Credit:** Another distinguishing feature of banks is that while they can create as well as transfer money (funds), other financial institutions can only transfer funds. In other words, unlike other financial institutions, banks are not merely financial intermediaries. This aspect of bank operations has been variously expressed. Banks are said to create deposits or credit or money, or it can be said that every loan given by banks creates a deposit. This has given rise to the important concept of deposit

multiplier or credit multiplier or money multiplier. The import of this is that banks add to the money supply in the economy, and since money supply is an important determinant of prices, nominal national income and other macro-economic variables, banks become responsible in a major way for changes in economic activity. Further, as indicated in Chapter One, since banks can create credit, they can encourage investment for some time without prior increase in saving.

Basis and Process of Credit Creation: Let us briefly discuss the basis and process of creation of money by banks. In modern economies, almost all exchanges are affected by money. Money is said to be a medium of exchange, a store of value and a unit of account. There is much controversy as to what, in practice in a given year, is the measure of supply of money in any economy. We do not need to get into that controversy here. Suffice it to say that everyone agrees that currency and demand deposits with banks are definitely to be included in any measure of money supply. Thus, apart from the currency issued by the government and the central bank, the demand or current or checkable deposits with banks are accepted by the public as money. Therefore, since the loan operations of banks lead to the creation of checkable deposits, they add to the supply of money in the economy. To recapitulate, the money-creating power of banks stems from the fact that modern banking is fractional reserve banking, and that certain liabilities of banks are accepted (used) by the public as money.

Process of Money Creation

The process of money creation works as follows. Assume that the legally required reserve ratio is 10 percent and that banks are maintaining just that ratio. Assume further that a bank in the economy receives a brand new input of ₹1000 of reserves either as a deposit or as proceeds of a sale of government bond to the central bank or in some other form. There is thus a creation of ₹1000 of bank money, but there is yet no multiple expansion of money. If banks were required to keep 100 percent cash reserve balances, no bank would be in a position to create extra money out of a new deposit of ₹1000 with it. But since a bank is required to hold only 10 percent of its deposits as cash reserves, it now has ₹900 as excess reserves which it can utilise to invest or to give a loan. Assume that the bank gives a loan of ₹900, and the borrower who takes the loan in cash or cheque deposits it either with the same bank or with some other bank. Either way, there has been a creation of money and the total amount of bank money created at this stage is ₹1000 + ₹900 = ₹1900. This process of creation can continue till none of the bank anywhere in the system has reserves in excess of the required 10 percent reserve, and the total money supply created in the economy is ₹10000. The ratio of new deposits to the original increase in reserves is called the *money multiplier* or *credit multiplier* or *deposit multiplier*. This multiplier will be equal to the reciprocal of the required cash reserve ratio (1/CRR). The process of creation of bank money does not work in practice to the full capacity or to the full potential as has been described above. Banks may have a reserve ratio which is higher than the required reserve ratio. There may also be leakages in the form of cash holding when the banks make loans. The process moves rather slowly and with jerks, and not as promptly and smoothly as implied. Subject to such qualifications, there is no doubt that modern banks can create money in the process of their working.[1]

[1]For a complete discussion of the money creation process, see Samuelson, P A and Nordhaus, W D, *Economics*, Fifteenth Edition, McGraw-Hill, New York, 1995, pp. 488–95.

8.3 SPECIAL ROLE OF BANKS

As said earlier, commercial banks have a special role in India. In fact, many financial experts even abroad have, of late, been emphasising the special place that banks hold in their countries also. The 'privileged role' of the banks is the result of their unique features. For example, the liabilities of banks are money, and, therefore, they are an important part of the payments mechanism of any country; they also have access to the discount window of the RBI, call money market (as both borrowers and lenders) and the deposit insurance. It would be difficult to eliminate such distinctive features of banks in the near future. There is also an important question as to whether they should be wiped out, and, if it is done, whether it would not have adverse consequences on the financial system.[2]

For a financial system to mobilise and allocate savings of the country successfully and productively, and to facilitate day-to-day transactions, there must be a class of financial institutions that the public views as safe and convenient outlets for its savings. In virtually all countries, the single dominant class of institutions that has emerged to play this crucial role as both the repository of a large fraction of the society's liquid savings and the entity through which payments are made is the commercial banks. The structure and working of the banking system are integral to a country's financial stability and economic growth.

Bank lending is especially important for companies. The theory of financial contracting under asymmetric information holds that information-intensive and information-problematic firms submit to the tight and detailed loan covenants so as to reduce agency costs. They delegate the tasks of monitoring and renegotiating debt contracts to financial intermediaries because these tasks are costly and the intermediaries are in a better position to reduce the costs. Intermediaries are more efficient in monitoring debt contracts because they are unlikely to free-ride on information-production by others as they have a larger stake, and they can renegotiate contracts more cheaply than the dispersed debenture holders. The public bond covenants tend to set their conditions on events that are relatively easy to verify, *viz.*, a major change in capital structure or a downgrading of credit rating. In contrast, the intermediary loan contracts are conditioned by performance measures such as working capital and net worth which are less easily controlled by the managers.

Further, the violation of a financial covenant often triggers financial distress. When this happens, banks can restructure the terms of contracts, *viz.*, wave covenants, extend maturity, extend more loans and require more collateral. Such flexibility reduces the cost of financial distress. Information asymmetries and free-riding by bond-holders, on the other hand, may force the financially distressed firms into inefficient spending cutbacks and even bankruptcy. It has been found in the United States that the firms' stock prices rise after an announcement that they have received bank loans, while they fall in response to announcement of a public bond offering.

Similarly, there are reasons why loans from even other financial institutions may not be a perfect substitute for bank loans. The economies of scope between deposit taking and lending give banks an information advantage over finance companies and other financial institutions. The deposit history of firms may inform banks about the credit risk involved in lending to these firms. Information on deposits activity may also make it easier for banks to monitor working capital covenants. The phenomenon of 'compensating balances' can

[2]For full discussion of issues involved, see Bhole, L M., 'Indirect vs. Direct System of Business Finance: Theory and Evidence', *International Journal of Development Banking*, July 1998.

mostly exist only in the case of banks, and no other institutions. The lending and deposit-taking activities of banks are complementary, and, go to build up banking relationship which increases the availability of funds to the firms, which, in turn, enables them to partially avoid taking more expensive trade credit. Personal relationships are far less important in borrowing from other financial institutions than from banks. Moreover, significant differences in collateral requirements exist between banks and other financial institutions. All such differences effectively segment the market for business lending, and make bank loans highly un-substitutable.

The Indian banking system has a very wide reach and deep presence in metropolises, cities, semi-urban areas and the remotest corners of the rural areas with its vast number of branches. It is one of the largest banking system in the world. It has been rightly claimed in certain circles that the diversification and development of the Indian economy are in no small measure due to the active role banks have played in financing economic activities of different sectors. They have been playing an important role in developing mutual funds, merchant banks, primary dealers, asset management companies and debt markets. They operate as issuers, investors, underwriters, guarantors in financial markets. By their participation, banks influence the growth and liquidity of debt markets. They would help in securitisation of debt market. They hold about 60 percent of debt stock of government securities, and they account for more than 50 percent of the issuance of bonds through public issues and private placements. Because of such considerations, the important position which banks have historically come to occupy in India should not be unwittingly destroyed or undermined in the name of promoting equity culture. Otherwise, monetary authorities would find it more and more difficult to achieve the goal of stability of the financial system and of the prices. The banking reforms, therefore, must aim not only at profitable banking but also at a viable, sound, safe and social banking.

Apart from their usual functions, foreign banks are now playing a special role in shaping the attitudes, perceptions and policies of foreign governments, corporates and other clients towards India. In particular, they are (a) structuring and syndicating project finance for power generation, telecommunications and mining projects in India, (b) advising and introducing overseas companies in joint ventures and collaborations with the Indian companies, (c) enlarging the spectrum of trade finance for the Indian business through securitisation of export loans, (d) helping to bring together foreign institutional investors and the Indian companies, (e) managing and syndicating euro-issues of debt and equity of the Indian companies, and (f) introducing new technology in data management and information systems.

8.4 MAJOR SERVICES PROVIDED BY COMMERCIAL BANKS

The major services provided by commercial banks are as follows:

(i) **Acceptance of deposits:** Accepting deposit from savers or account holders is the primary function of bank. Banks accept deposit from those who can save money, but cannot utilise in profitable sectors. People prefer to deposit their savings in a bank because by doing so, they earn interest.

(ii) **Lending money or advancing of loans:** Banks are profit-oriented business organisations. So they have to advance loan to public and generate interest from them as profit. After keeping certain cash reserves, banks provide short-term, medium-term and long-term loans to needy borrowers.

(iii) **Investment of funds:** Banks invest in the capital market and other markets for maximising the returns.

(iv) **Remittance of funds:** Banks help their customers in transferring funds from one place to another through cheques, drafts and so on.

(v) **Dealing in foreign exchange:** Banks deal with foreign currencies. As per the requirement of customers, banks exchange foreign currencies with local currencies, which is essential to settle down the dues in the international trade.

(vi) **Overdraft Facility:** Bank provides overdraft facilities to its customers through which they are allowed to withdraw more than their deposits.

(vii) **Discounting of Bills of Exchange:** This is another popular type of lending by the modern banks. Through this method, a holder of a bill of exchange can get it discounted by the bank, in a bill of exchange; the debtor accepts the bill drawn upon him by the creditor *(*i.e. holder of the bill) and agrees to pay the amount mentioned on maturity. After making some marginal deductions (in the form of commission), the bank pays the value of the bill to the holder. When the bill of exchange matures, the bank gets its payment from the party which had accepted the bill.

(viii) **Credit Cards:** Credit cards or plastic money are innovative instruments in the area of financial services offered by commercial banks. A credit card facilitates the card holders to purchase goods, to travel and dine in a hotel without making immediate payments within a specified credit limit, which was fixed by the issuer. The issuing institution also fixes up the terms and conditions of the use of credit card that includes the interest rate, annual fees, penalties, the grace period and other features. Usually, the issuers evaluate the worthiness of the applicant and based upon that credit card is issued. According to the credit rating, holders of the credit card may be allowed a specified amount of credit from 1 month to another. Based on the type of consumer needs, credit card companies issue several types of credit cards. The credit card operation follows a particular cycle mentioned in Table 8.1. The mechanism of credit card operation and credit card transaction process are explained in Fig. 8.1 and Table 8.2.

Table 8.1 Credit card operation cycle

S. No.	*Steps*	*Function*
1	Credit purchases	A cardholder purchases goods/services and gives the credit card
2	Processing of credit card	Merchant establishment delivers goods after taking an authenticated credit card and noting the number and taking signatures
3	Raising of bill	The merchant establishment raises the bill for the purchase and sends it to the credit card-issuing bank for payment.
4	Making payment	The issuing bank pays the amount to the merchant establishment.
5	Bills to the cardholder	The issuing bank raises bill on the credit cardholder and sends it for payment.
6	Card payment	The credit cardholder makes the payment to the issuing bank.

Table 8.2 Credit card transaction process

S. No.	*Interchange process*	*Functioning*
1.	Authorisation	The cardholder pays for the purchase and the merchant submits the transaction to the acquirer (acquiring bank). The acquirer verifies the credit card number, the transaction type and the amount with the issuer (Card-issuing bank) and reserves that amount of the cardholder's credit limit for the merchant. An authorisation will generate an approval code, which the merchant stores with the transaction.

(*Contd.*)

2.	Batching	Authorised transactions are stored in 'batches', which are sent to the acquirer. Batches are typically submitted once per day at the end of the business day. If a transaction is not submitted in the batch, the authorisation will stay valid for a period determined by the issuer, after which the held amount will be returned to the cardholder's available credit.
3.	Clearing and settlement	The acquirer sends the batch transactions through the credit card association, which debits the issuers for payment and credits the acquirer. Essentially, the issuer pays the acquirer for the transaction.
4.	Funding	Once the acquirer has been paid, the acquirer pays the merchant, the merchant receives the amount totalling the funds in the batch minus the 'discount rate', which is the fee the merchant pays the acquirer for processing the transactions.
5.	Charge Backs	A chargeback is an event in which money in a merchant account is held due to a dispute relating to the transaction. Charge backs are typically initiated by cardholders. In the event of a chargeback, the issuer returns the transaction to the acquirer for resolution. The acquirer then forwards the chargeback to the merchant, who must either accept the chargeback or contest it.

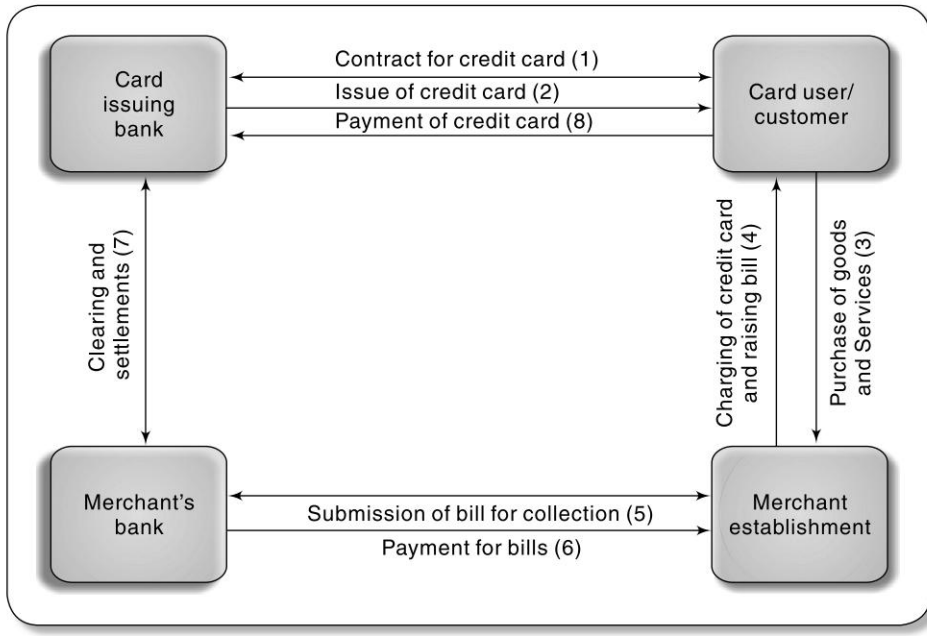

Figure 8.1 **Mechanism of credit card operation.**

(ix) **Automatic Teller Machines (ATMs) Services:** ATMs replace human bank tellers in performing basic banking functions such as deposits, withdrawals and account inquiries. Key advantages of ATMs include: (i) 24-hour availability, (ii) reduction of labour cost, and (iii) locational convenience.

(x) **Debit cards:** Debit cards are used to electronically withdraw funds directly from the cardholders' accounts and is also used for buying the commodities directly from the shops. Most debit cards require a personal identification number (PIN) to be used to verify the transaction.

(xi) **Online banking:** Online banking is a service offered by banks that allows account holders to access their account data via the internet. Online banking is also known as 'Internet banking'. To carry out the online banking the customers need a specific login identity and password. All the necessary transactions like transferring money, paying bills and so on can be possible through online banking. The operational mechanism of Internet banking is as follows**:** The primary focus of online banking or Internet banking is to facilitate safe, secure and faster financial services to customers electronically. It has emerged as a contrast to branch banking which was the traditional way to access banking services. The e-banking system is connected with the core banking system operated by a bank. In order to access the online banking facility, a customer needs to register with the financial institution and set up user identity and password there by providing all requisite credentials for customer registration. Once the unique identity number and password has been created by the bank, then to avail the facility, the customer is required to go to secure website of the particular bank and enter the needful information which was previously set up. Usually, the banks devise a portfolio of financial services for the customer that includes obtaining account balances, a list of the recent transactions, electronic bill payments and funds transfers between different accounts of the same customer, for example, transfer of money from saving account to recurring deposit account. The user can also transfer funds to other customers' accounts through third party transfer for the account holders of the same bank and through NEFT (national electronic funds transfer), RTGS (real time gross settlement system) and IMPS (immediate payment services) to customers of different banks. It is very important to note that to transfer funds (may be intra-bank or interbank), the customer need to add the account details of beneficiaries online; however, a small amount can be transferred using quick transfer facility without adding beneficiaries. Most banks also enable a customer to download copies of bank statements, which can be printed at the customer's premises (some banks charge a fee for mailing hard copies of bank statements). Along with these facilities, the bank may also enable the customer to order a cheque book, statements, report loss of credit card or debit card, payment of credit card, stop payment on a cheque, change of address and other routine actions. The process of online banking is explained in Fig. 8.2.

(xii) **Private banking:** Private banking is the offering of personalised financial and banking services that are traditionally provided to a bank's rich, high net worth individuals (HNWIs). For wealth management purposes, HNWIs have accrued far more wealth than the average person, and therefore have the means to access a larger variety of conventional and alternative investments. Private Banks aim to match such individuals with the most appropriate options.

(xiii) **Mobile Banking:** Mobile banking (also known as M-Banking) is a term used for performing balance checks, account transactions, payments, credit applications and other banking transactions through a mobile device such as a mobile phone.

(xiv) **Public Provident Fund Account:** Banks are to accept Public Provident Fund (PPF) deposits and render all possible help to customers in operating PPF accounts.

(xv) Many banks have set up specialised subsidiary companies and assets–liabilities management companies, and either through them or on their own, they have entered into related activities, such as merchant banking, mutual funds, hire-purchase finance, housing finance, venture capital, equipment leasing, factoring, securities booking and trading and a host of other financial services. Banks have begun to have portfolio investment in hire-purchase companies and venture capital funds. Through these

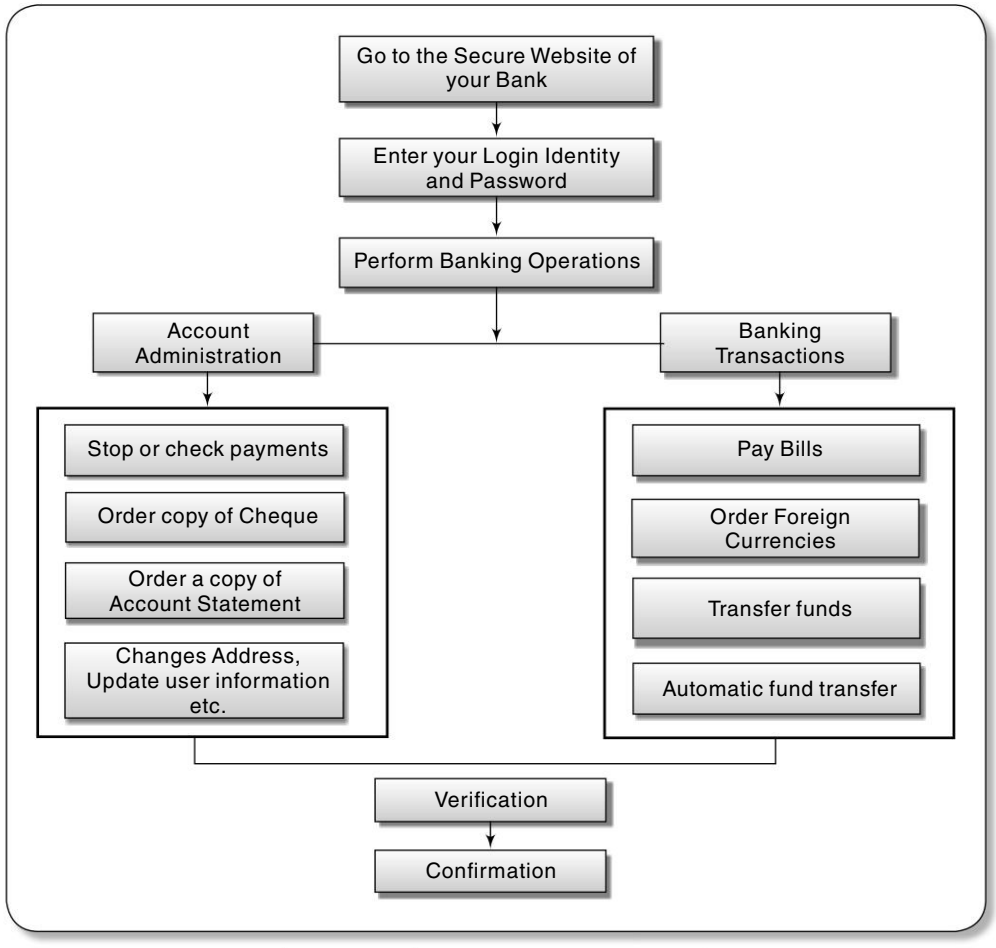

Figure 8.2 Online banking process.

changes, the interface and links of the banking sector with the capital market and other financial institutions have been growing.

(xvi) They are not to insist, subject to usual safeguards, on succession certificate, for releasing to the heirs or survivors the balance in the deposit account and other assets held by the deceased account holder.

(xvii) They are to make payments against drafts promptly without awaiting receipt of confirmatory advice, and accept passports and postal identifications as adequate for purposes of identification.

(xviii) They are to observe non-business working days even in rural branches.

(xix) In respect of mail transfers, they are to afford credit of main transfer to the client's account within a maximum period of 7 days from the date of deposit of funds, failing which they should pay interest on the proceeds of the transfer for the delayed period at a uniform rate of 5 percent per annum irrespective of whether the proceeds are to be credited to current/saving bank/fixed deposit/borrowal

accounts and also whether the delay occurs in postal transit, due to misplacement, or for some other reason.

(xx) If the due date of payment of proceeds of fixed deposit falls on a holiday or a Sunday or on a non-business working day, they should pay interest at the originally contracted rate for the holiday intervening between the date of expiry of deposit and the date of actual payment of proceeds of the deposit.

(xxi) They are to augment the installed capacity of locker facility, not as a business proposition but as a service to the community at large, and 80 percent of this capacity should be made available on a first-come-first-served basis.

(xxii) They are to pay interest at saving bank rate for delayed collection of outstation cheques beyond the prescribed period of 10 days in respect of cheques/drafts lodged at and drawn on state capitals and 14 days for cheques lodged at all other places.

(xxiii) They are to avoid any stipulation requiring borrowers to keep a part of the loan amount as deposits.

(xxiv) They are to utilise application money in respect of debentures/bonds only for the purposes specified under the Companies Act.

(xxv) Commercial banks hire financial, legal and market experts who provide advices to customers regarding investment, industry, trade, income, tax and so on. They also manage the selling and realizing of any property in its possession. They also deal with any property received as security against any loan or advance.

8.5 BANK FINANCIAL STATEMENTS

LO 2

Know the two financial statements through which the financial data on commercial banks are presented

The financial data on commercial banks are always presented through two financial statements: (i) The balance sheet, and (ii) income statement. A bank's balance sheet presents the organisation's financial condition at a single point of time. Balance sheets are always prepared on a particular date, that is, usually the last day of the quarter or year. The income statement shows all major revenues and expenditures, the net profit or loss for the period and amount of dividends declared; it also measures the bank's financial performance over a period of time such as a quarter or year.

8.5.1 Balance Sheet of the Commercial Bank

The balance sheet of a commercial bank has two sides (i) the *liabilities* and (ii) the *assets*. Analysing the balance sheet of a bank, we can know about the system which a bank follows for raising and allocation of the funds in different categories.

(A) Liabilities of Banks

Bank's *liabilities* constitute the following five major items: The *share capital*, the contribution of the shareholders; *reserves and surplus*, which the bank has accumulated over the years from its undistributed profits; *deposits* made by the customers; *borrowings* from other banks and central bank and *other liabilities*

and provisions. Among all types of liabilities, bank deposit has the largest share. The following section highlights about the types of bank deposits.

(i) Types of Bank Deposits: Deposits serve as a means of payment and as a medium of saving, and are a very important variable in the national economy. Deposits constitute the major source of funds for banks. Indian banks accept two main types of deposits—(i) *demand deposits* and (ii) *term deposits.* Demand deposits can be sub-divided into two categories *current* and *savings*. *Current deposits* are chequable accounts and there are no restrictions on the amount or the number of withdrawals from these accounts. It is possible to obtain a clean or secured overdraft on current account. Banks also extend to the account-holders certain useful services such as free collection of out-station cheques and issue of demand drafts. At present banks generally do not pay interest on current deposits. All current deposits are included in order to estimate the volume of money supply in a given period of time.

Savings deposits earn interest. Although cheques can be drawn on savings accounts, the number of withdrawals and the maximum amount that might, at any time, be withdrawn from an account without previous notice are restricted. In India, the practice with regard to the division of savings deposits into demand and time liabilities has undergone a change. Earlier, in respect of each account, the maximum amount withdrawable without prior notice (or where the balance in the account was not more than this maximum, the whole of the balance) was regarded as a demand liability; and the excess over the maximum amount was treated as a time liability. With effect from 16 August, 1978, the average of the monthly minimum balances in a savings account on which interest is being credited is to be regarded as a time liability and the excess over the said amount as a demand liability. In other words, before August 1978, demand deposits included that portion of savings deposits which was freely withdrawable, whereas after the new regulation, what is included is the portion of savings deposits that is freely drawn upon by the depositors, while the portion which remains with the banks earning interest is taken as time deposits.

Call deposits is the third sub-category of demand deposits. They are accepted from fellow bankers and are repayable on demand. These deposits carry an interest charge. They form a negligible part of total bank liabilities. *Term Deposits* are also known as fixed deposits or time deposits and they are the genuine saving medium. They have different maturity periods on which depends the rate of interest.

(B) Assets of Banks

Banks have nine categories of *assets*: (a) cash in hand, (b) balances with the central bank, (c) balances with other banks, (d) money at call and short notice, (e) balances with banks outside India, (f) investments in government and other approved securities, (g) bank credit, (h) fixed assets, and (h) other assets**.** Among these assets, investment in cash and government securities serves the liquidity requirements of banks and is influenced by the central bank policy. Quantitatively, investments and bank credit are banks' most important assets.

(i) Investments: Investments by the commercial banks are of three types: (a) Government of India securities; (b) other approved securities; and (c) non-approved securities. While the first two types are known as SLR securities, the third one is known as non-SLR securities. The non-SLR investments include the investments in shares, debentures, commercial papers, mutual fund units and so on.

(ii) Types of Loans and Advances: Bank credit or loans and advances are the major component of commercial banks assets. Banks in India provide mainly short-term credit for financing working capital needs although,

as will be seen subsequently, their term loans have increased over the years. The various types of advances provided by them are (a) cash credits and overdrafts, (b) purchase and discounting of commercial bills, and (c) demand and term loans.

(a) Cash credits and overdrafts are said to be running accounts from which the borrower can withdraw funds as and when needed up to the credit limit sanctioned by his banker. Usually, while cash credit is given against the security of commodity stocks, overdrafts are allowed on personal or joint current accounts. Interest is charged on the outstanding amount borrowed and not on the credit limit sanctioned. In order to curb the misuse of this facility, banks used to levy a commitment charge on the unutilised portion of the credit limit sanctioned. However, this practice has now been discontinued. Although these advances are mostly secured and of a self-liquidating character, banks are known to provide them on 'clean basis' in certain cases. Technically, these advances are repayable on demand, and are of a short-term nature. Actually, the widespread prevalent practice is to roll over these advances from time to time. As a result, cash credits actually become long-term advances in many cases. Although, technically these advances are highly liquid, it has been pointed out that it is a myth to regard them so because even the most profitable borrower would hardly be in a position to repay them on demand.

(b) Purchasing and discounting of bills—internal and foreign—is another method of advancing credit by banks. It is adopted mainly to finance trade transactions and movement of goods. Bill finance is either repayable on demand or after a period not exceeding 90 days. It has been observed that bills traded in India are often fake bills created out of book debts of industrial and business units. Bill financing has certain favourable features. Banks can raise funds in the secondary markets by rediscounting bills with the RBI and financial institutions like IDBI and Discount and Finance House of India (DFHI). They can also earn some money if the rediscount rate is lower than the discount rate. Further, the buying and selling of bills expand the banks' business more quickly by the faster recycling of funds.

(c) Demand and Term Loans: These fixed amounts are repayable on demand or in instalments. They are normally made in lump sums and interest is paid on the entire amount. The borrower cannot draw funds beyond the amount sanctioned. There are two categories of loans: demand loans and term loans. The term '*demand loans*' has been used in India in different senses. Demand loans by convention mean loans which have to be repaid when demanded by the creditor and, as such, they are short-term loans. In another sense, they refer to financial accommodation granted by the SBI to commercial and co-operative banks. In still another sense, they refer to one of the components of credit, the other component being variable cash credit. This bifurcation of cash credit was recommended by the Tandon Committee.[3] The demand loan here comprises the minimum level of borrowing which the borrower is expected to use throughout the year and, therefore, it is also regarded as a core portion of cash credit. While the borrower is supposed to pay interest on the entire amount of a demand loan, he has to pay interest only on the utilised part of variable cash credit. The Tandon Committee had suggested that the rate of interest on demand loan be lower by 1 percent than the rate on variable cash credit. In all the above-mentioned senses, the demand loan is a short-term loan. *Term loans* are defined as (i) loans sanctioned for a period exceeding 1 year with specific schedule of repayment, (ii) interim cash credits/bridge loans pending disbursement of sanctioned term loans, and (iii) instalment credit where repayment is spread over more than 1 year. They are advanced for purchasing fixed assets, that is, for meeting part of the capital cost of new and old projects.

[3]RBI, Report of the Study Group to Frame Guidelines for Follow-up of Bank Credit, Bombay, 1975.

After discussing about different types of loans and advances a discussion on the approaches to bank lending and other issues related to bank lending has been presented in the following section.

Approaches to Bank Lending: Traditionally, the loan policies of banks are known to be determined by three major principles—*safety*, *liquidity* and *profitability*. There are two approaches to bank lending—the '*liquidation approach*' and the '*going concern approach*'. The former is also known as a 'real bills' doctrine. The 'liquidation approach' looks mainly to the assets of the borrower as security for a loan. It implies a short-term rather than a long-term view of the borrowers' prospects and usually involves taking a charge of his assets. The 'going concern approach', on the other hand, lays greater emphasis on the borrower's ability to repay the loan out of future cash flow rather than his ability to offer some tangible assets as security for the loan. At its extreme, the 'liquidation approach' implies lending against the security of mainly 'self-liquidating' assets such as stocks of commodities and so on. Banking systems all over the world follow a combination of these approaches, but, each of them tends to prefer one rather than the other approach. For example, while the U.S. banks who lend mainly on term basis emphasise the 'going concern approach', the British banks who lend mainly in the form of overdrafts emphasise the 'liquidation approach'. Patterned as they are on the British banking system, the Indian banks also predominantly adopt the 'liquidation approach'. However, since the beginning of the planning era, banks in India have been trying to emphasise the principle of security in their lending to a much higher degree than ever before. Similarly, particularly since their nationalisation, banks have been required to lend a portion of their resources on criteria other than profitability.

Before Independence and afterwards for many years, commercial banks in India continued to adopt dual criteria in their lending. Their loans to the private commercial sector (which formed the major portion of their loans at that time) were made mainly on the basis of security and profitability. But when they granted advances to the industrial sector, they often did not insist on security in the form of tangible assets. These loans were made against guarantees from managing agents. In economic terms, therefore, loans to the industrial sector were not very risky because there was the confidence that managing agents would see industrial units out of difficulties, and that bank loans would be repaid. The abolition of the managing agency system and increasing professionalisation of management resulted in a qualitative change in the risk borne by banks because there was no guarantee that professional managers would stick to the same organisations in times of difficulty.

With the abolition of the managing agency system, banks adopted the '*liquidation approach*' in case of industrial loans. However, the programme of organised industrialisation created a much greater requirement for industrial finance, both short-term and long-term. Since there was shortage in the supply of long-term funds, banks had to accept, at least in principle to begin with, the responsibility of meeting partly the demand for term loans. These changes implied that the banks had to recognise the relevance of the principle of lending on the basis of actual needs of the borrower, the purpose of borrowing, and soon. This was the beginning of demoting security as the *raison d'etre* of lending.

In the post-nationalisation period, a shift to the 'going concern approach' has become more substantial, and it has almost been forced upon banks by social policy. One of the planks for the nationalisation of banks was that they should not provide credit on the basis of the size of the assets of the borrower and his social status. It was argued that this resulted in neglecting the credit requirements of small, needy and potentially safe borrowers. In the post-nationalisation period, therefore, banks have been required to lend on such considerations as need, production potential and potential capacity to repay loans. Concomitantly, banks are now required to channelise a greater proportion of their resources at concessional rates to small and

marginal farmers, retailers, small entrepreneurs and other small borrowers, although his policy compromises the principle of profitability. The requirement that banks should help sick industrial units financially also amounts to the demotion of the principles of safety and profitability in bank lending.

This formulation should not be misinterpreted to mean that changes in the concept of lending have become widespread, that the Indian banking system has become similar to the United States system in this regard, and that there are no pitfalls in the shift being discussed. The fact that cash credit still remains a major method of bank lending implies that security of tangible assets, preferably of the self-liquidating type, still remains the most important basis of bank lending. Similarly with commercial banks sometimes undercutting each other to snatch large accounts when the credit needs of small and asset-less borrowers are not satisfied and when banks have surplus liquidity, it means that banks have been rather slow in extending loans without tangible security. Further, it could be argued that changes in the concept of lending (as also other changes such as sectoral distribution of credit) in India have been more a result of social compulsions than of foresight and innovative nature in bank management. With the fixation of targets in respect of credit to priority sectors, credit/deposit ratio for rural and semi-urban areas, and with the provision of guidelines for holding inventories by industrial units, the banks have been increasingly made to change their lending attitudes, procedures and techniques.

It must also be admitted that the official policy in respect of unsecured lending by banks has been ambivalent. While banks are expected to shift from security-based lending to need-based lending, some central banking restrictions on unsecured advances in terms of the Banking Regulation Act continue to operate. Although such restrictions have been liberalised from time to time, and exemptions to these restrictions are often granted, they nevertheless must have acted as a formal impediment to the progress of lending without the security of physical assets.

Credit Plans: As a part of the discussion on the approaches to disbursement of credit, it may not be out of place to mention that during the past few years, banks in India have mooted and have been trying to implement the idea of credit disbursal through credit plans for individual banks and for the national economy as a whole. They have been doing so under the leadership and guidance of the RBI. Commercial banks have started preparing credit budgets. Since the budgets for banks cannot be prepared without the budgets of their customers, banks have been persuading their customers to submit to them their (customers) budgets or operational plans for the coming years. The experience of formulation of credit plans should enable banks to avoid imbalances in the demand and supply of bank credit. This is certainly an important development from the point of view of the formulation of national economic planning. As a part of credit plan, the Reserve Bank had advised public sector banks to prepare special agricultural credit plans (SACP) on an annual basis beginning 1994–1995 with a view to achieving distinct and marked improvement in the flow of credit to agriculture. Under SACP, banks are required to fix self-set targets for achievement during the year (April–March).

Securities used in Bank Lending: Commercial banks provide advances on a secured or unsecured basis. There is a difference in the legal and economic meaning of the concept of security. Legally, a secured advance is a loan or an advance made on the security of assets, whose market value is not at any time less than the amount of loan or advance. An unsecured advance is a loan or advance not so secured. Thus, in legal terminology, loans against personal security, or against book debts or bills receivable or government and other guarantees, are unsecured advances. In economic terms, unsecured advances defined in this manner are not necessarily a bad credit risk; in many cases they may be a first class banking risk.

Securities in loan transactions can be divided into various categories: personal and impersonal, tangible or physical and intangible, direct and indirect, primary and collateral, formal and informal, specific and continuing and so on. In the case of personal security, the banker has a personal right of action against the borrower; the common forms of this type of security are promissory notes, a bond, personal obligation of a mortgager or a personal liability of a guarantor. Personal security is also known as 'intangible security'. Impersonal security, on the other hand, is in some physical or tangible form such as movable or immovable property. Direct securities are furnished by the borrowers themselves, whereas indirect securities are given by a third party to secure a borrower's account. Guarantees are a good example of indirect securities. Any goods or securities of the borrower coming into the banker's hands in the ordinary course of his business as a banker, and which are retained by him in the exercise of his right of general lien, are known as 'informal securities'. Finally, specific securities are those which cover only an existing or specific debt, whereas continuing securities cover all sums now due or which may hereafter become due in the future. Banks obtain legal claims to securities by way of lien, pledge, hypothecation, mortgage, charge, assignment and set-off. Legal provisions of these different methods cannot be discussed here. It may be sufficient to point out that these methods differ in respect of transfer of ownership, possession and power of sale of securities.

There is a long array of goods which are in vogue as securities in the banking business in India. In an agricultural country such as India, the importance of agricultural commodities as security is natural. However, the diversification of financial instruments has resulted in the use of certain new securities in bank lending, *viz.*, units, provident fund receipts, new small savings media and so on. Gold, gold ornaments and other jewellery are quite common as security in rural areas. Landless labourers used to obtain loans particularly from smaller banks against these goods. Big commercial banks do not encourage borrowing against gold and similar securities. However, if the objective of providing more loans to small borrowers is to be achieved, it would be helpful if nationalised banks readily accept gold as security.

The production of agricultural commodities is subject to significant fluctuations from year to year. Therefore, trading in these commodities has been subject to a great deal of speculation. Many of these commodities are known as 'sensitive' commodities. As a result, bank advances against the security of these commodities are regulated through selective credit controls by the monetary authorities in India. The RBI imposes minimum margin requirements, and/or ceiling on the advances to be made by banks against the security of these commodities. These margin requirements are not to be confused with the margins imposed by banks themselves because the purpose of the former is to regulate credit expansion, while that of the latter is to ensure safety of bank loans.

Margins: The loan made by a bank against a given security is always less than the value of that security. This difference is known as a 'margin'. The extent of margin differs from security to security; the major principles which determine it are marketability, ascertainability of value, stability of value and transferability of title of the security. Certain margin requirements which are in vogue in India are (a) gold bullion, 10 percent; (b) gold ornaments, 20–30 percent; (c) government and other trustee securities, 10 percent; (d) ordinary shares, 40–50 percent; (e) preference shares, 25 percent;(f) debentures, 15–20 percent; (g) life policies, 90 percent of surrender value; (h) commodities, 25–50 percent; and (i) immovable property, 50 percent.

Seasonal Character as a Determinant of Bank Credits: The empirical studies on determinants of bank credits have shown that available of lendable resources, level of non-performing assets (NPAs), seasonal character or the seasonal factors and asset prices are the major determinants of bank credit in India. Business

in the money market in India has been characterised by marked seasonal variations. There are two seasons: the busy season (October to March) and the slack season (April to September). March and September represent the peak and trough of seasonal activity. During the busy season there is an increase in the bank credit to private and public sectors, a decrease in government holdings and cash ratio, an increase in borrowings from the RBI and so on. When there is a return flow of funds in the slack season, these items move in the reverse direction. Seasonal variations are also reflected in changes in money supply in the economy. The rate of growth of money supply is either very low or negative in the slack season as compared to the busy season. In order to moderate these seasonal changes, and to help smoothen the transition from one season to the other, the monetary authorities announce appropriate policy measures at the beginning of each season.

Why are commercial banks' operations characterised by seasonal fluctuations? Has there been a change with the passage of time in the extent and pattern of seasonal variations in banking operations? Agricultural production is subject to seasonal variations and to the extent that banks finance trading in agricultural commodities, and also the manufacturers using agricultural commodities, the vagaries of agriculture are reflected in the seasonal ups and downs in the banking business. Accordingly, changes in the structure of national output and sectoral distribution of credit should determine the extent and pattern of seasonal variations. For example, if the share of the industrial sector in national output increases and if banks finance non-traditional industries to a greater extent, the seasonal demarcation in banking operations may be blurred. A similar result may ensue if banks provide greater finance—not so much for the movement of agricultural goods but for agricultural production activity. For production activity, farmers would need funds during May–July, that is, during those months which are traditionally regarded as slack. It is obvious that for the latter factor to influence the traditional seasonal pattern, the extent of agricultural loans ought to be far greater than it has been in the post-nationalisation period.

Two additional factors which have influenced the emerging pattern of seasonal variations may also be mentioned here. First, the statutory liquidity ratio requirements have made investment in government securities rather inflexible. Second, relative rates of growth of finance for food procurement operations in the busy and slack seasons have directly determined the credit/deposit ratio at the end of each season. As the SLR has been significantly reduced now and as bank credit for food procurement operations has declined, the influence of these factors on the seasonality of bank activity would now diminish. The RBI has generated a new type of statistical evidence on the changes in the seasonal character of various economic time series, including monetary and banking aggregates. It has calculated what are known as 'Seasonal Factors' (SFs) by using econometric method such as X-12 ARIMA method.

Credit Information and Bank Lending: Availability of sufficient information regarding the customer is crucial for the safety of a loan. When banks advance mainly self-liquidating loans, the need for detailed information about the borrower is much less. With the changing concept of lending, the purpose of loan and its end-use have become important matters in credit disbursal and the need for detailed information about the customer has become greater. There are many ways in which the banks can obtain credit information. Borrowers themselves can be asked to supply such information, banks can exchange information among themselves, or specialised agencies maintaining records about credit rating of different customers may be approached for the purpose. In the United States, quite a few reputed organisations of this type exist to meet the information requirements of the United States banks. In India, with the virtual absence of such organisations, banks must depend largely on the first two methods. A considerable amount of thought and effort is now being devoted to improve the informational inputs in the banking business. Recently, the Tandon

Committee recommended a new information system in which bank financing would be placed on a quarterly budget-reporting system for operational purposes. The practice of exchanging information among banks is not sufficiently prevalent in India; it has existed only in name. Although technically banks can exchange information among themselves, it has been found that credit reports exchanged by them have been very brief and superficial. It has also been observed that due to lack of coordination in inter-bank dissemination of information, banks have suffered in their rural loan business because of tardy recoveries and growing faults. In the absence of private organisations which can supply credit information, the RBI set up a Credit Information Bureau in 1962 which is a sort of 'information intermediary' to which banks are directed to supply information regarding their customers, and it, in turn, supplies such information on request to any bank. It appears that this experiment has not met with much success. Therefore, the study group on exchange of information has recommended the setting up of an autonomous agency (Credit Information Trust) which would undertake to collect, store and supply credit information.

8.5.2 Income Statement

The major items in the income statement of the bank are presented in Table 8.3.

Table 8.3 Major items of income statement of commercial bank

(i)	Interest income from loans
(ii)	Total interest expenses (interest on borrowings made by banks)
(iii)	Net interest income (i – ii)
(iv)	Non-interest income
(v)	Total operating income (iii + iv)
(vi)	Overhead expenses
(vii)	Provision for loans and leases
(viii)	Securities gains (losses)
(ix)	Pre-tax operating income [v – (vi + vii) + viii]
(x)	Tax
(xi)	Net operating income
(xii)	Net income (xi – any extraordinary items)

8.6 BANK PERFORMANCE MEASURES

LO 3

Explain how the bank's performances are measured

The balance sheet and income statements are integrated for the evaluation of bank performances. A wide variety of financial ratios are calculated to access the different characteristics of financial performances of banks. Various key ratios are commonly used to evaluate different dimensions of bank performances such as profitability, liquidity, asset quality, economic value added and so on. Liquidity can be defined as the extent to which the bank has funds available to meet cash demands for loans and deposit withdrawals. The major ratios used to measure profitability of the bank are return on assets (ROA), return on equity (ROE) and net interest margin (NIM) whereas other ratios are used for measuring

asset quality (provision for loan loss ratio and loan ratio), liquidity ratios (temporary investments ratio and volatile liability dependency ratio) and interest rate sensitivity. All these ratios are measured as follows:

ROA: It measures the ability of the managers to utilise the financial and other resources of the bank to generate returns. It is calculated as follows:

$$\text{ROA (\%)} = \frac{\text{Net Income}}{\text{Total Assets}} \times 100$$

ROE: It reveals how much profit the bank generates with the money the shareholders have invested and it is calculated as follows:

$$\text{ROE (\%)} = \frac{\text{Net Income}}{\text{Total Equity Capital}} \times 100$$

The relationship between ROA and ROE can be expressed as follows:

$$\frac{\text{Net Income}}{\text{Total Equity Capital}} = \frac{\text{Net Income}}{\text{Total Assets}} \times \frac{\text{Total Assets}}{\text{Total Equity}}$$

ROE = ROA × Equity Multiplier or leverage.

NIM: It examines how successful a bank's decision on giving advances is compared to its debt obligations. A negative value denotes that the bank did not make an optimal decision, because interest expenses were greater than the amount of income generated by providing the loans and it is calculated as follows:

$$\text{Net Interest Margin (\%)} = \frac{\text{Total Interest Income} - \text{Total Interest Expenses}}{\text{Average Earning Assets}} \times 100$$

Provision for Loan Losses Ratio: All the banks provide the estimates of future loan losses on their income statements and this is related to volume of total loans. This ratio is measured as follows:

$$\text{Provision for Loan Loss Ratio (\%)} = \frac{\text{Provisions for Loan Losses}}{\text{Total Loans}} \times 100$$

Loan Ratio: This ratio indicates the extent at which assets are considered to loans against the other assets of the bank.

$$\text{Loan Ratio (\%)} = \frac{\text{Net Loans}}{\text{Total Loans}} \times 100$$

Temporary Investments Ratio: Temporary investments are the bank's most liquid assets. This is measured as follows:

$$\text{Temporary Investments Ratio (\%)} = \frac{\begin{array}{c}\text{Government securities sold + Investment}\\ \text{securities with maturities of 1 year}\\ \text{or less + Due from banks}\end{array}}{\text{Total Loans}} \times 100$$

Volatility Liability Dependence Ratio: This ratio varies inversely with liquidity.

$$\text{Volatility Liability Dependency Ratio (\%)} = \frac{\text{Total Volatile Liabilities} - \text{Temporary Investments}}{\text{Net Loans and Leases}} \times 100$$

Interest Sensitivity: Interest sensitivity is the responsiveness of liability costs and asset returns to changes in interest rates. The difference between the quantities of interest-sensitive assets and liabilities is known as the rupee gap ratio.

$$\text{Rupee Gap Ratio (\%)} = \frac{\text{Interest Rate Sensitive Assets} - \text{Interest Rate Sensitive Liabilities}}{\text{Total Assets}} \times 100$$

(₹ *in crore*)

Example: Performance Measures of State Bank of India

Balance Sheet

Liabilities	*2014–2015*	*2015–2016*
Total share capital	747	776
Equity Share capital	747	776
Reserves and Surplus	1,27,691	1,43,498
Net worth	1,28,438	1,44,274
Deposits	15,76,793	17,30,722
Borrowings	2,05,150	2,24,190
Total Debt	17,81,943	19,54,913
Other Liabilities and Provisions	1,37,698	1,59,875
Total Liabilities	20,48,079	22,59,063
Assets		
Cash and balances with RBI	1,15,883	1,29,629
Balances with Banks, Money at call	58,977	37,838
Advances	1,300,026	14,63,700
Investments	4,95,027	4,77,097
Gross Block	9,329	9,819
Net Block	9,329	9,819
Capital work in Progress	0.00	570
Other Assets	68,835	1,40,408
Total Assets	2,048,079	2,259,063
Contingent Liabilities	10,93,422	10,64,167
Book value	185	185
Profit and Loss Account		
Income		
Interest Earned	1,52,397	1,63,685
Other Income	22,575	28,158
Total income	1,74,972	1,91,843
Expenditure		
Interest Expended	97,381	1,06,803

(*Contd.*)

Employee cost	23,537	25,113
Selling, Admin and Misc expenses	39,836	48,275
Depreciation	1,116	1,700
Operating Expenses	38,677	41,782
Provisions and contingencies	25,811	33,307
Total Expenses	1,61,871	1,81,893
Net profit for the year	13,101	9,950
Profit brought forward	0.32	0.32
Total	13,101	9,950
Operating profit	39537	43,258
Equity Dividend	2,557	2,018
Corporate dividend tax	520	334
Per share data (Annualised)		
Earnings Per share(₹)	17.55	12.82
Equity dividend (%)	350	260
Book Value(₹)	172	185
Appropriations		
Transfer to statutory reserves	10,023	7,597
Proposed dividend/Transfer to govt	3,077	2,352
Balance c/f to balance sheet	0.32	0.32
Total	13,101	9,950

Using the above data calculate the return on asset, cost of deposit ratio, return on loans, interest income ratio, net interest income ratio, expenditure ratio and operating profit ratio of SBI.

Answer: Performance measures of State Bank of India in the year 2014–2015 and 2015–2016

Sl. no.	*Performance measure*	*Formula*	*2015–2016*	*2014–2015*
1	Return on Assets	Net profit/total asset ratio	(9,950/22,59,063) × 100 = 0.44%	(13,101/20,48,079) × 100 = 0.63%
2	Cost to deposit ratio	Interest paid on deposit/ Total deposit	(1,06,803/17,30,722) × 100 = 6.17%	(97,381/15,76,793) × 100 = 6.17%
3	Return on Loans	Interest earned on loans/ Total Loans	(1,63,685/14,63,700) × 100 = 11.18%	(1,52,397/13,00,026) × 100 = 11.72%
4	Interest Income ratio	Interest income/Total asset	(1,63,685/22,59,063) × 100 = 7.24%	(1,52,397/20,48,079) × 100 = 7.44%
5	Net interest income ratio	Net interest income/Total assets	(56,882/22,59,063) × 100 = 2.51%	(55,016/20,48,079) × 100 = 2.68%
6	Expenditure ratio	Total expenditure/Total Asset Ratio	(1,81,893/22,59,063) × 100 = 8.05%	(1,61,871/20,48,079) × 100 = 7.90%
7	Operating profit ratio	Operating profit/Total asset	(43,258/22,59,063) × 100 = 1.91%	(39,537/20,48,079) × 100 = 1.93%

8.7 NON-PERFORMING ASSETS (NPAS) AND CLASSIFICATION OF ASSETS

Non-Performing Assets (NPAs): At present, non-performing advances or NPAs of banks and other financial institutions has become a widely talked about subject in India. It is constantly referred to for indicating the performance and the state of health of various types of financial institutions. An asset becomes non-performing when it ceases to generate income for the bank. Earlier an asset was considered as non-performing asset (NPA) based on the concept of '*Past Due*'. A 'non-performing asset' (NPA) was defined as credit in respect of which interest and/or instalment of principal has remained 'past due' for a specific period of time, that is, two quarters. With a view to moving towards international best practices and to ensure greater transparency, '90 days' *overdue* norms for identification of NPAs have been made applicable from the year ended 31 March, 2004. As such, with effect from 31 March, 2004, a non-performing asset shall be a loan or an advance where the interest and/or instalment of principal remain overdue for a period of more than 90 days in respect of the loan. For agricultural loans a loan granted for short-duration crops will be treated as NPA, if the instalment of principal or interest thereon remains overdue for two crop seasons, and a loan granted for long-duration crops will be treated as NPA, if the instalment of principal or interest thereon remains overdue for one crop season. Long-duration crops would be crops with crop season longer than 1 year, and crops which are not long-duration crops would be treated as short duration crops.

Assets Classifications: Banks should classify their assets into the following broad groups, *viz.*, (i) standard assets, (ii) sub-standard assets, (iii) doubtful assets, and (iv) loss assets.

Standard Asset: Standard Asset is one which does not disclose any problems and which does not carry more than normal risk attached to the business. Such an asset should not be an NPA.

Sub-Standard Asset: With effect from 31 March 2005, an asset would be classified as sub-standard if it remained NPA for a period less than or equal to 12 months. In such cases, the current net worth of the borrowers/guarantors or the current market value of the security charged is not enough to ensure recovery of the dues to the banks in full.

Doubtful Asset: With effect from 31 March 2005, an asset is required to be classified as doubtful, if it has remained NPA for more than 12 months. For Tier I banks[4], the 12-month period of classification of a sub-standard asset in doubtful category is effective from 1 April 2009.

Loss Asset: A loss asset is one where loss has been identified by the bank or internal or external auditors or by the Co-operation Department or by the Reserve Bank of India inspection but the amount has not been written off wholly or partly. In other words, such an asset is considered un-collectible and of such little value that its continuance as a bankable asset is not warranted although there may be some salvage or recovery value.

There are many measures of NPAs which require that the user should be alert whether he is using the same measure while studying inter-temporal and inter-organisational changes in NPAs. The measures used are gross NPAs/gross advances, gross NPAs/total assets, net NPAs/advances and net NPAs/total assets and so on.

[4](i) Banks having deposits below ₹100 crore, operating in a single district. (ii) Banks with deposits below ₹100 crore operating in more than one district, provided the branches are in contiguous districts and deposits and advances of branches in one district separately constitute at least 95 percent of the total deposits and advances, respectively of the bank. (iii) Banks with deposits below ₹100 crore, whose branches were originally in a single district but, subsequently, became multi-district due to reorganisation of the district.

8.8 CAPITAL BASE OF THE BANKS

The capital base of commercial banks has become a subject of great attention in the whole world in the recent past. The Basle Committee on Banking Supervision appointed by the Bank for International Settlement (BIS) established in 1988 a system in which minimum capital requirements were set for banking firms based on the risk of bank assets. It specified capital to risk (weighted) assets ratio (CRAR) of 8 percent as the capital adequacy norm. This risk-based capital standard has been adopted by many countries including India where it came into force in 1992–1993. The Bank for International Settlement released the revised framework for capital measurement and capital standards in June 2004. The revised framework provides revised methodology along with options for banks and banking systems for determining the capital requirements for credit risk and operational risk. The revised framework also enables banks/supervisors to select approaches that are most appropriate for their operations and financial markets. The framework is expected to promote adoption of stronger risk management practices in banks. The Basel II framework envisages a three-pillar approach. Pillar I prescribes the minimum capital requirement. Pillar II comprises supervisory review that not only ensures that banks have adequate capital to support all the risks in their business, but also encourages banks to develop and use better risk management techniques in monitoring and managing their risks. Pillar III complements Pillar I and II in encouraging market discipline by developing a set of disclosure requirements that allow market participants to assess key information on the scope of application, capital, risk exposures, risk assessment process and, hence, the capital adequacy of a bank. In this context, the basic approach of capital adequacy framework is that a bank should have sufficient capital to provide a stable resource to absorb any losses arising from the risks in its business. Capital is divided into tiers according to the characteristics/qualities of each qualifying instrument. For supervisory purposes capital is split into two categories: Tier I and Tier II. These categories represent quality of different instruments as capital. Tier I capital consists mainly of share capital and disclosed reserves and it is a bank's highest quality capital because it is fully available to cover losses. Tier II capital on the other hand consists of certain reserves and certain types of subordinated debt. The loss absorption capacity of Tier II capital is lower than that of Tier I capital.

8.9 RETAIL BANKING

LO 4
Illustrate retail banking

Banks today operate under their spreads, declining margins and rising costs. Consumer finance was not a favoured avenue for banks in India till the other day. They were primarily financing production-based activities. But the industrial recession, economic downturn, industrial sickness, mounting NPAs with corporates, failure of many big companies have made banks prefer to be selective in their lending to corporates which has become more risky. As a result, banks are diverting their resources to retail lending. In addition to financing working capital of corporates and giving term loans, banks are diversifying into retail banking or personal banking which appears to be a viable alternative to cope up with the poor credit offtake and far augmenting business in the current situation. The reduction in SLR/CRR, poor credit demand due to recession, greater risk due to high NPAs in traditional lending and similar changes have made banks to diversify their business in the form of retail, personal loans such as education loans, home loans, auto loans, white goods loans, credit card loans, travel loans (along with entering into treasury operations). The Indian commercial banks' retail lending

has been increasing continuously over the years. Information technology, net banking, mobile banking, telebanking, ATMs and demat accounts have facilitated the growth of retail banking.

The retail banking has created challenges before the banks to set up and invest heavily in new credit delivery or distribution channels which can economise on transactions costs, increase sales productivity and offer greater convenience in service provision. Banks are increasing off-site delivery channels which are helping in new product development, increasing speed of transactions processing and reducing transactions costs. It has been suggested that banks should follow the following steps for making new distribution channels successful:

- Understand customers' current transaction behaviour and their underlying attitude.
- Use sophisticated experimental customer research to assess the economic impact of tactics designed to change that behaviour.
- Develop an integrated channel migration plan which blends economic and non-economic incentives to ensure that right initiatives are targeted at the right customers.
- Protect sales effectiveness by utilising the non-branch channels.
- Design non-branch channels to emphasise personalised interaction to counteract decreased loyalty among remote customers.

Today's retail banking sector is characterised by three basic characteristics: (i) multiple products (deposits, credit cards, insurance, investments and securities), (ii) multiple channels of distribution (call centre, branch, internet and kiosk), and (iii) multiple customer groups (consumer, small business, and corporate). The typical products offered in the Indian retail banking segment are housing loans, consumption loans for purchase of durables, auto loans, credit cards and educational loans. The loans are generally for duration of 5–7 years with housing loans granted for a longer duration of 20 years.

The major drivers of retail business in India are as follows:

1. First, economic prosperity and the consequent increase in purchasing power have given a fillip to a consumer boom.
2. Second, changing consumer demographics indicate vast potential for growth in consumption, both qualitatively and quantitatively. India is one of the countries having highest proportion (70%) of the population below 35 years of age (young population). The BRIC report of the Goldman Sachs, which predicted a bright future for Brazil, Russia, India and China, mentioned Indian demographic advantage as an important positive factor for India.
3. Third, technological factors played a major role. Technological innovations relating to increasing use of credit/debit cards, ATMs, direct debits and Internet and phone banking have contributed to the growth of retail banking in India.
4. Fourth, the treasury income of the banks, which had strengthened the bottom lines of banks for the past few years, has been on the decline during the last 2 years. In such a scenario, retail business provides a good vehicle of profit maximisation. Considering the fact that retail's share in impaired assets is far lower than the overall bank loans and advances, retail loans have put comparatively less provisioning burden on banks apart from diversifying their income streams (Gopinath, 2005).

8.10 BANK COMPETITION

While discussing the question of bank competition, certain institutional and economic realities in India need to be kept in mind. First, there is a high degree of concentration of the banking business with a handful of banks. The market for banking services is an oligopolistic market. Second, the policy environment was characterised by close regulation and control until 1991. For example, the interest rates on deposits as well as financial accommodation were controlled by the monetary authorities until very recently. Third, profitability was not the dominant criterion on the basis of which banks were expected to function. There were restrictions on the choice (in respect of type as well as volume) of assets by banks. Banks were expected to finance the government through the purchase of government securities and other accommodation; they were expected to finance priority sectors, sick units and so on. It was a situation in which incentives for vigorous competitive pursuit of objectives were wanting. As was expected in the oligopolistic markets, the markets were shared through mutual understanding and mutually beneficial agreements. This policy was blessed by the authorities. Finally, Indian banks had a captive internal market which was insulated against all international competition.

Against this background, banks can be said to have competed among themselves and with non-bank financial institutions (NBFI), non-banking companies, small saving organisations and so on. In this competition, they lost some ground in the recent past. The investors had found that UTI, non-banking companies and small saving organisations offered a rate of return much more attractive than the banks did. The investment in the former had been made all the more attractive by many tax concessions. Of late, the Indian banks have been facing sharp competition from foreign banks. The development of the market for certificates of deposits (CDs) and commercial papers (CPs) had increased the scope and prospects for competition among banks for deposits and loans. The corporate customers can be expected to shop around from bank to bank for the best terms on these instruments. The success in meeting this competition would mean higher cost of funds.

The methods which banks have been using for attracting *savings* from NBFIs are as follows: (a) offering a competitive rate of return, (b) introducing a variety of schemes to meet diverse investment needs and preferences of savers, (c) offering them better services, (d) offering depositors supplementary services such as transfer of money, travellers cheques and so on. There is little scope for a bank to attract depositors from any other bank by using these techniques. A single bank can increase its share of the market at the cost of another bank only through 'product differentiation' via proximity, convenient hours of work and the courteous behaviour of its employees. Banks have been competing among themselves by employing the services of agents and brokers for collecting deposits. Sometimes they have been found to employ unfair methods such as offering interest rates higher than the ceiling for attracting deposits from big account holders such as companies, financial institutions and so on.

As far as the *utilisation of resources* is concerned, there was hardly any need for competition either with other financial institutions or among themselves. When the aggregate demand for funds was generally greater than the supply, banks could always find a sufficient volume of business. Since bank credit could not be substituted in most cases by finance from other financial institutions, competition among the two groups was not possible. The sectors to which banks gave credit, the purposes for which they gave credit, the type of credit they gave were different from those of other financial institutions such as the LIC, UTI and statutory financial institutions. Recent developments, such as the adoption of the 'participation or consortium approach' by banks and other financial institutions in granting term loans, and the RBI directive that banks must share accounts with credit limits above ₹5 crore had further diminished the scope for competition. However, in

some years of surplus liquidity, banks indulged in undercutting to snatch big accounts. If they had shown greater enterprise in matters of lending, say, to small and neglected borrowers, there would not have been any need for them to resort to such unfair competition.

In short, operating as they were in a highly regulated and protected environment, competition was never a major issue before 1991. But after the deregulation and liberalisation in that year, the forces of competition have become quite tangible now. The public sector banks are now allowed to access the capital market to raise funds, which has diluted the government shareholding in banks. Similarly, the barriers to entry have been relaxed; new private sector banks, foreign banks and local area banks have been licensed and set up. As said earlier, several changes have been taking place in the banking business, which include (a) the disappearance of distinction between banks and other financial institutions, (b) emergence of the concept of universal banking, (c) deregulation of interest rates, and above all (d) an overall improvement in the functional and operational flexibility of banks. All these changes will induce competition in urban, semi-urban, rural areas and international arena.

To meet the emerging competition, banks will have to (a) increase new forms of lending such as loans against shares, consumer durables and refinanced assets, (b) develop merchant banking services vigorously and (c) provide advisory and information-based roles for all types of clients. There are certain favourable features which would enable banks to meet this competition with advantage: (a) they have a country-wide network of branches; (b) they are in a position to provide liquidity; and (c) they are still a very much chosen medium of saving, for the public. With these, banks should meet competition by concentrating on services to the customer and efficiency in internal operations. Having said this, it may be pointed out that there are reasons why banks cannot be asked to swear by competition beyond a limit. First, the world over, the banking sector has been found to be fragile and vulnerable because its working depends much more than other organisation, on public confidence, faith, trust, which, in turn, can easily be affected by the 'herd mentality' or 'crowd behaviour'. Bank runs are contagious and a bank failure, therefore, can generate a first class systemic crisis, which, in turn, can compromise the overall stability of the financial and economic system. Second, one of the major functions of a bank is to operate the country's payments system, and it is a 'public good'.

8.11 INTERNATIONAL BANKING

LO 5

Understand various types of international banking and the risks associated with it

International banking can be defined as banking transactions crossing national boundaries. International lending, claims of domestic bank offices on foreign residents, claims of foreign bank offices on local residents, claims of domestic bank offices on domestic residents in foreign currency are the major activities involved in International banking.

8.11.1 Types of International Banks

International banks can be categorised by the services they perform. They can be classified as follows:

(i) **Correspondent Banks:** These banks provide services to their multinational (MNC) clients to carry out their business worldwide through its local bank. It involves the relationship between two or more banks, which are situated in different countries. For example: smaller foreign banks those want to do business in other country enter into a correspondent relationship with a large bank based in that country.

(ii) **Representative Office:** It is a service facility provided by the parent bank to assist MNC clients of the parent bank in dealing with the bank's correspondents. Representative office also assists in providing information about local business and credit evaluation of the MNC's local customers.

(iii) **Subsidiary and Affiliate Bank:** A subsidiary bank is a locally incorporated bank, that is, either wholly owned or owned in major part by a foreign parent bank. An affiliate bank is the one that is only partially owned by a foreign parent bank, but not controlled by it. Both types of banks operate under the banking laws of the country where they are incorporated.

(iv) **Foreign Branch of a Local Bank:** It operates like a local domestic bank, but legally part of the parent, not a separate entity. This follows the banking regulations of home country and foreign country.

(v) **Offshore Banking Centre:** These centres are the type of banking system in a country, which allows foreign accounts or permit external accounts beyond the normal scope of local economic activity. They are independent of the banking regulations of the hosting country. Bahamas, Bahrain, Hong Kong and Singapore are the major offshore banking centres.

8.11.2 Different types of risk in International Banking

Country Risk: Along with the risks present in their domestic operations, institutions engaged in international activities are exposed to country risk[5]. Country risk includes the possibility of nationalisation or expropriation of assets, government repudiation of external indebtedness, exchange controls and currency depreciation or devaluation.

Transfer Risk: Transfer risk is the possibility that an asset cannot be serviced in the currency of payment because the obligor's country lacks the necessary foreign exchange or has put restraints on its availability. In general, transfer risk is relevant whenever a bank extends credit across international borders and the extension of credit is denominated in a currency external to the country of residence of the obligor.

Credit Risk: It refers to the potential inability of a borrower to comply with contractual credit terms and bears the closest resemblance to the primary risk in domestic lending. Evaluation of this risk is similar to any credit decision and involves analysis of appropriate factual information, including credit volume requested, loan purpose, anticipated term and proposed repayment source.

Currency Risk: Currency risk pertains to the vulnerability of international lenders to variations in currency exchange rates and in every international extension of credit.

8.12 OTHER ISSUES IN COMMERCIAL BANKING IN INDIA

8.12.1 System of Cheque Clearances

LO 6

Describe other issues in commercial banking along with its structure and growth in India

Cheques are an important negotiable instrument widely used in the banking business. In legal terminology, a cheque is a bill of exchange drawn on a specified banker. It is used by depositors for withdrawing cash from banks or

[5]The risk arises due to change in the economic, social, and political conditions of a foreign country, which adversely affect an institution's financial interests.

for settling their debts. The utility of a cheque as an instrument for payment and transfer of money depends upon its quick clearance. Clearing houses therefore form an important part of the transfer mechanism in the banking system. A clearing house is an organisation in a particular place which facilitates the settlement of interbank claims in the form of cheques, drafts and so on. It helps to economise on cash movement between banks. It also helps to reveal an overextension of business by any one bank in relation to another. The number of clearing houses in India has gone up considerably over the years. Wherever the RBI has an office, the local clearing house is managed by it; in other places, they are managed either by the SBI or its subsidiaries.

8.12.2 Participation Certificates and InterBank Participations

The RBI introduced Participation Certificates (PCs) in April 1970, with the objectives of greater mobilisation of funds, reducing recourse to the RBI and diversifying the availability of financial instruments. The PC is an instrument, whereby a bank can sell to a third party (transferee) a part or all of a loan made by the bank to a client (the borrower).[17] These certificates had become very popular in 1978 and 1979 after which the RBI advised banks to achieve a significant and lasting reduction in their recourse to PCs. As a result, the use of PCs went down drastically after 1980. The PCs scheme was replaced by two types of interbank participations (IBPs), one on risk-sharing basis and the other without it. These were strictly interbank instruments confined to scheduled commercial banks excluding RRBs; their purpose was to even out short-term liquidity within the banking system. The IBPs with risk sharing could be issued for 91–180 days, and the rate of interest on them was fixed by participating banks subject to a minimum of 14 percent per annum. The IBPs without risk sharing was a money market instrument with a maturity not exceeding 90 days and the rate of interest on them was fixed by banks subject to a ceiling of 12.5 percent per annum. This ceiling was removed with effect from 1 May, 1989. The IBPs without risk were treated as part of the net demand and time liabilities of the borrowing banks and were subject to CRR and SLR requirements. Only a few banks issued IBPs with risk sharing for small amounts. IBPs with a maturity of 3 months were preferred by the investors, the interest rates ranged between 14 and 17 percent per annum.

8.12.3 Stockinvest Scheme

It is the financial instrument which was introduced by banks in 1992 to facilitate investment in industrial securities in the primary market. It helps to replace the present cumbersome process of refunding application money in case securities are not allotted. The stock invest is a kind of guaranteed cheque issued by a bank against the deposits maintained by the investor, in lieu of cash, personal cheque or draft. It ensures that the investors' share application money remains in the deposit account under lien to the bank. When it is used, money is not withdrawn by the bankers to the issue till the time of allotment, whereas in the case of a normal cheque, it is encashed by them within a week. It blocks the money in the bank account, fetching interest to the account-holder till the time of allotment at the fixed deposit rate. The stockinvest is issued against the special account to be opened with the bank, and it is as liquid as a savings bank account. The scheme has been further reviewed by RBI and it was observed that the use of Stockinvests as a mode of payment for application for allotment of shares/debentures in the primary market has declined substantially. Moreover, several measures have been taken by SEBI for bringing down the allotment period under primary issues, which have considerably reduced hardships caused to the investors on account of delay in the allotment process. In view of these reasons, RBI has withdrawn this scheme in 2003.

8.12.4 Consortium Approach or Multiple Banking Arrangements

This approach to lending was introduced by the RBI in 1974. It required that more than one bank would finance a single borrower requiring large credit limit. It (a) enabled banks to spread risk of lending, (b) broke the monopoly of big banks to have large accounts, (c) enabled banks to share experience and expertise, (d) introduced uniformity in approaches to lending, (e) enabled banks to pool their resources, and (f) checked multiple financing of the same account. Each consortium had a lead bank, which had the largest share in the loan, which processed the loan proposal, which called the meetings of the consortium for sanction of limits and review of accounts, which obtained RBI permission for credit limits and which conducted joint inspection of the borrower's activities. The borrower executed a single set of documents with the lead bank. It obtained the letter of authority from member banks and released the initial requirements of the borrower; thereafter, it obtained reimbursements from the member banks to the extent of their shares in advance. If the member banks delayed the reimbursement beyond a week, the lead bank was entitled to charge a penal interest at the rate of 7 percent per annum for the period of delay. This arrangement was also called a 'Single Window Lending'.[6]

The working of this scheme showed that banks quite often did not adhere to the RBI guidelines, that large banks tended to use their weight unfairly in the consortium, that they often shielded the borrower sidetracking the queries of participating banks, and that there was no uniform approach to evaluate credit proposals. It appears that banks had not really moved towards the consortium spirit. For example, banks insisted on handling individually lucrative business, such as that of foreign exchange. Certain unscrupulous borrowers enjoying credit facilities under 'multiple banking arrangement' after defrauding one of the financing banks, continue to enjoy the facilities with other financing banks and in some cases avail even higher limits at those banks. In certain cases, the borrowers use the accounts maintained at other financing banks to siphon off funds by diverting from the bank on which the fraud is being perpetrated. This is due to lack of a formal arrangement for exchange of information among various lending banks/FIs. In some of the fraud cases, the securities offered by the borrowers to different banks are the same.

In view of this, all the banks which have financed a borrower under 'multiple banking' arrangement should take co-ordinated action based on commonly agreed strategy, for legal/criminal actions, for follow up for recovery, for exchange of details on *modus operandi*, for achieving consistency in data/information on frauds reported to Reserve Bank of India. Therefore, the bank which detects a fraud is required to immediately share the details with all other banks in the multiple banking arrangements. In case of consortium arrangements, individual banks must conduct their own due diligence before taking any credit exposure and also independently monitor the end use of funds rather than depend fully on the consortium leader. The threshold for *Early Warning Signals* (*EWS*) *and Red Flagged Accounts* (*RFA*) is an exposure of ₹500 million or more at the level of a bank irrespective of the lending arrangement (whether solo banking, multiple banking or consortium). All accounts beyond ₹500 million classified as RFA or 'Frauds' must also be reported on the Central Repository of Information on Large Credits (CRILC) data platform together with the dates on which the accounts were classified as such.

[6]Another connotation of the concept of single window lending is that both the term loan and working capital loan for a given project are made available by the same financial institution.

8.12.5 Lead Bank Scheme, Service Area Approach and Action Plans

The authorities have evolved various approaches or schemes or institutional arrangements to guide and monitor the overall development of banks in general and social banking in particular. The Lead Bank Scheme (LBS), the Service Area Approach (SAA) and the Action Plans (APs) are some of these approaches.

Lead Bank Scheme (LBS): The genesis of Lead Bank Scheme (LBS) can be traced to the Study Group headed by Prof. D. R. Gadgil (Gadgil Study Group) on the organisational framework for implementation of the social objectives, which submitted its report in October 1969. The study group drew attention to the fact that commercial banks did not have adequate presence in rural areas and also lacked the required rural orientation. The study group, therefore, recommended the adoption of an 'Area Approach' to evolve plans and programmes for the development of an adequate banking and credit structure in the rural areas. A Committee of Bankers on Branch Expansion Programme of public sector banks appointed by the Reserve Bank of India under the Chairmanship of Shri F. K. F. Nariman (Nariman Committee) endorsed the idea of area approach in its report (November 1969) recommending that in order to enable the public sector banks to discharge their social responsibilities, each bank should concentrate on certain districts where it should act as a 'Lead Bank'.[7] Following these recommendations, the Lead Bank Scheme was introduced by the RBI in December 1969 with these objectives: (a) to survey the potential for banking, industrial, and agricultural development in a given area, mostly a district, (b) to mobilise deposits on a massive scale, (c) to increase lending, on reasonable terms to the weaker sections of the society, along with the underdeveloped sectors and areas in the economy, (d) to make banks one of the key instruments in local development, (e) to expand the network of bank branches in unbanked and under-banked areas in a planned manner so that greater regional balance is achieved in banking development, (f) to prepare district credit plans (DCPs) for the lead districts, and (g) to enhance the proportion of bank finance to the priority sectors.

Under this scheme, a given bank is entrusted with the responsibility of (a) locating growth centres, (b) assessing deposit potential, (c) identifying functional and territorial credit gaps, and (d) evolving coordinated programmes of credit deployment in each district assigned to it, with the help of other banks and credit agencies. Since August 1976, the lead banks are required to assume leadership in formulating district credit plans which are the blueprints for action by banks and other financial institutions to bring about overall development of the district. The lead banks, therefore, are an important agency in the institutional arrangements for credit planning—district, regional and national. The RBI has allotted all the districts, except metropolitan cities, to nationalised banks and each of these banks has been designated a lead bank for the districts allotted to it.

In view of the number of changes that had taken place in the financial sector, the Lead Bank Scheme was last reviewed by the High Level Committee of the Reserve Bank of India in 2009. The High Level Committee held wide ranging discussions with various stakeholders, *viz.*, state governments, banks, development institutions, academicians, NGOs, MIFIs, and so on, and noted that the scheme was useful in achieving its original objectives of improvement in branch expansion, deposit mobilisation and lending to the priority sectors, especially in rural/semi urban areas. There was overwhelming consensus that the scheme needed to continue. Based on the recommendations of the Committee, guidelines were issued to State Level Bankers Committee (SLBC) convenor banks and lead banks for implementation. Envisaging greater role for private

[7]www.rbi.org.in/Scripts/NotificationUser.aspx?Id=9077&Mode=0.

sector banks, the lead banks were advised to ensure that private sector banks are more closely involved in the implementation of the Lead Bank Scheme. The private sector banks should involve themselves more actively by leveraging on Information Technology bringing in their expertise in strategic planning. They should also involve themselves in the preparation as well as implementation of the District Credit Plan. As on 30 June, 2014, 25 public sector banks and one private sector bank have been assigned lead bank responsibility in 671 districts of the country. State Level Bankers' Committee (SLBC)/Union Territory Level Bankers' Committee (UTLBC) as an apex level forum at state/union territory (UT) level coordinates the activities of the financial institutions and government departments in the state/union territory under the Lead Bank Scheme. SLBC Convenorship is assigned to banks for this purpose. As on 30 June, 2014, the SLBC/UTLBC convenorship of 29 states and seven union territories has been assigned to 16 public sector banks and one private sector bank.

In the beginning the Lead Bank Scheme (LBS) was applicable to all districts in the country except districts in metropolitan areas. Metropolitan areas were kept out of the Lead Bank Scheme as the reach of banking network in metropolitan areas was quite high in comparison to rural and semi-urban areas in the country. In view of the wide spread challenge of financial exclusion in metropolitan areas, especially among the disadvantaged and low-income groups and to facilitate doorstep banking to the excluded segment of the urban poor and to provide an institutional mechanism for co-ordination between the government and banks, it was decided to bring all districts in metropolitan areas under the LBS. Accordingly, 16 districts in metropolitan areas of Chennai (1), Delhi (11), Hyderabad (1), Kolkata (1) Mumbai (2) were assigned lead bank responsibility and thus brought under the Lead Bank Scheme during 2013–2014.[8]

Service Area Approach (SAA): In the context of vast expansion in the network of bank branches and in the volume of credit disbursed in rural areas, the public sector banks had undertaken in November–December 1987, studies in selected districts to assess the impact of bank credit on rural development. As a sequel to the findings of these studies, the RBI introduced a new strategy of rural lending in the form of SAA as a part of the LBS. The SAA became operational on 1 April, 1989. Under this approach, each semi-urban and rural branch of banks including RRBs is assigned specific areas within which it will operate, adopting a planned approach to its growth. The basic objective of SAA is to improve the quality of rural lending, that is, to make rural lending more purposeful and productive so that it results in higher income levels in rural areas. The service areas of each branch normally comprise 15–25 villages. After carrying out surveys of villages in respect of potential for lending, the identified branches prepare integrated annual credit plans for the villages that lie in their respective service areas. The annual branch credit plans are aggregated into block credit plans which, in turn, are aggregated into DCPs to achieve coordination on an ongoing basis for the effective implementation of the plans. The system to monitor continuously the progress in implementation of SAA also has been created. The Service Area Approach scheme was last reviewed in December 2004 and it was decided to dispense with the restrictive provisions of the scheme while retaining the positive features of the SAA such as credit planning and monitoring of the credit purveyance. Accordingly, under SAA the allocation of villages among the rural and semi-urban branches of banks were made not applicable for lending except under government-sponsored schemes. Borrowers have a choice to receive credit from any bank of their choice.

Action Plans (APs): Consequent on a rapid and vast increase in the total banking business after nationalisation, a need was felt to consolidate and improve the quality of banks' operations, services and overall performance.

[8]RBI, *Master Circular*, July 1, 2014.

The system of formulating APs to achieve this objective was introduced around 1985 by the RBI. These action plans cover important and diverse areas such as organisational structure, training and human resources development, customer service, deposit mobilisation, credit management, housekeeping, manpower planning, recycling of funds, productivity, efficiency, profitability, modernisation and technology upgradation and consolidation of SAA. The implementation of the APs is monitored at the highest level both in banks and the RBI. This has helped to bring about significant improvement in the operation and performance of banks. As a result of APs, banks have taken several steps to strengthen their structure and internal systems of supervision and control. Training capacities have been improved and training courses diversified. Through regular annual reviews of credit limits, health coding of accounts, ongoing supervision of large limits and detection of incipient sickness, credit management has been strengthened. More attention is being paid to cost control, productivity of business per bank employee and reduction of loss-making branches. Housekeeping, internal audit and inspection, customer service and technology upgradation have been improved and strengthened. Action plans are said to have helped to establish an active management culture within the banks.

8.12.6 Local Area Banks (LABNKs)

The Union Budget 1996–1997 announced a very important policy measure regarding the development of commercial banking in India, namely, the setting up of the local area banks (LABNKs) as commercial banks in the private sector. LABNKs would meet the banking requirements of the local areas primarily in rural India, although they can be set up in the urban and metropolitan areas also. They would be similar to RRBs in certain aspects and different from them in certain other aspects. While the RRBs are in the public sector, LABNKs would be in the private sector. Like RRBs, they also would be scheduled banks. The main objective of this measure is to create a suitable institutional framework to promote rural savings and to provide credit for all types of activities in local areas. Unlike RRBs which can operate in many districts with large number of branches, the LABNKs would be set up in district towns and would operate in a maximum area of three geographically contiguous districts, with their head offices being at the respective centres within their respective areas of operation. The minimum paid-up capital of these banks has to be ₹5 crore. The promoters could be individuals, firms or societies. The family of the individual promoters was not allowed to keep more than 40 percent of the equity capital of the banks. The NRI promoters could not exceed more than 20 percent of total number of promoters. The local area banks are subject to prudential norms, accounting policies and other policies as stipulated by the RBI. Such a bank has to maintain capital adequacy at 8 percent of risk-weighted assets and comply with the norms of income recognition, asset classification and provisioning since inception. Each local area bank is allowed to open branch in only one urban centre per district and rest of the branches are allowed to be opened in the rural and semi urban centres subject to requisite clearance in respect of rural branches from the District Consultative Committee. LABNKs have to observe the priority sector lending target (40 percent of the net bank credit) and the weaker sections' lending target (25 percent of priority sector lending or 10 percent of the net bank credit). They have to maintain a CRR of 3 percent and an SLR of 25 percent. Their lending and deposit rates are to be governed by the same rules that are applicable to the RRBs. They also have to observe all the prudential and capital adequacy norms which are applicable to other banks. They are to be governed by the provisions of the RBI Act, 1934; the Banking Regulation Act, 1949 and other relevant statutes. They are to be registered as a public limited company under the Companies

Act, 1956. They can open branches only in their respective areas of operation, and branch licensing in their case would also be governed by the branch licensing policy existing from time to time. The concept of local area banks has remained a non-starter. There were only four such banks in 2015.

8.12.7 Commercial Banks and Microfinance

Over the years, microfinance is being established as a viable mechanism to provide financial services to the excluded people. In India, 21.9 percent of the people are poor and 41.3 percent are financially excluded, and therefore, presence of microfinance is very much crucial. There are mainly two modes of microfinance distribution, that is, Bank-Self Help Group (SHG) linkage programme (SBLP) and private microfinance institutions (MFI). SBLP is being monitored by National Bank of Agriculture and Rural Development (NABARD) whereas MFIs are private organisations in various forms (trust, society, company, non-banking financial companies). Presently, SBLP is having 44.68 lakh SHGs with ₹51,545.46 crore outstanding loan portfolio spread across the regions. Disintegrating within SBLP, the commercial banks with their large branch network led the majority of microfinance penetration having share of 80.36 percent in SHGs and 76.99 percent of loan portfolio whereas the regional rural banks and cooperative banks account for 12.94 and 6.70 percent in SHGs and 20.40 and 2.61 percent in loan portfolio, respectively. Data also reveal that among commercial banks, public sector banks are the major contributor capturing 90.66 percent of clients whereas the private banks cater to mere 9.34 percent clients. However, one of the striking feature of commercial banks led microfinance is skewed geographically with southern region dominating with 63.47 percent SHGs and 78.82 percent loan portfolio followed by Eastern India.

The achievement of commercial banks reaching the financially excluded people became possible because of technological advancement, infrastructure development and human capital enhancement. These developments helped in reducing the operational and transaction costs, a critical barrier to commercial banks expansion. The NGOs also played a significant role in this SBLP growth. They provided support to banks in the form of group formation, nurturing and capacity building of SHGs. Despite all these developments, one major concern stands for the commercial banks, that is, constant presence of high percentage of non-performing assets (NPA) in SHGs advances. In year 2015, the NPA figures reported for public commercial banks is as high as 8.02 percent followed by regional rural banks (7.71 percent) and private sector banks (1.05 percent). The incidences of high NPA impede the banks for their further microfinance distribution. Various reasons contribute to this high NPA, such as improper SHGs quality check and adopting target-based approach for credit disbursement, poor follow-up of borrower's loan utilisation and in some states politicisation of SHG movement by political parties by announcing the waiver off scheme.

Except their direct engagement in microfinance through SBLP, commercial banks are contributing to microfinance development indirectly by providing loan to private MFIs at low interest rate under priority sector lending provision. In this mechanism, MFIs work as intermediaries to reach the beneficiaries who are difficult to access otherwise because of their location and occupation. In reciprocation, bank lending helps the MFIs to generate capital at low cost for their operation and expansion. Recent set up of MUDRA bank for the purpose of credit disbursement to MSMEs through MFIs is again a forward step to microfinance development. Data of last 4 years (2012–2015) shows that there is an increase of 191.82 percent in bank loan

advances to the MFIs indicating the progress of microfinance under Bank-MFI linkage mechanism. Looking within the commercial banks' lending, private banks are the highest lenders with advances of 45.07 percent followed by public and foreign banks having 35.25 and 19.68 percent, respectively. As on March 2015, the gross NPA of banks to MFIs stand at 3.04 percent of outstanding loans. Important inference that is drawn from the above discussion is that the public sector banks are more involved in direct lending for microfinance, which incurs high NPA, but the private banks are more interested in indirect contribution to microfinance by lending larger advances to private MFIs.

8.13 STRUCTURE AND GROWTH OF COMMERCIAL BANKS IN INDIA

Figure 8.3 and Tables 8.4–8.7 present the growth of the Indian banking system with varying details and for different spans of time. Together they should enable the reader to assess all the possible dimensions of the structure and growth of banks in India. For lack of space, only the salient features of these aspects are discussed below. The number of banks and offices of scheduled commercial banks have increased continuously during the period 1969–2014. The population per office has declined from 64,000 per office in the year 1969 to 10,800 per office in the year 2014 (Table 8.4).

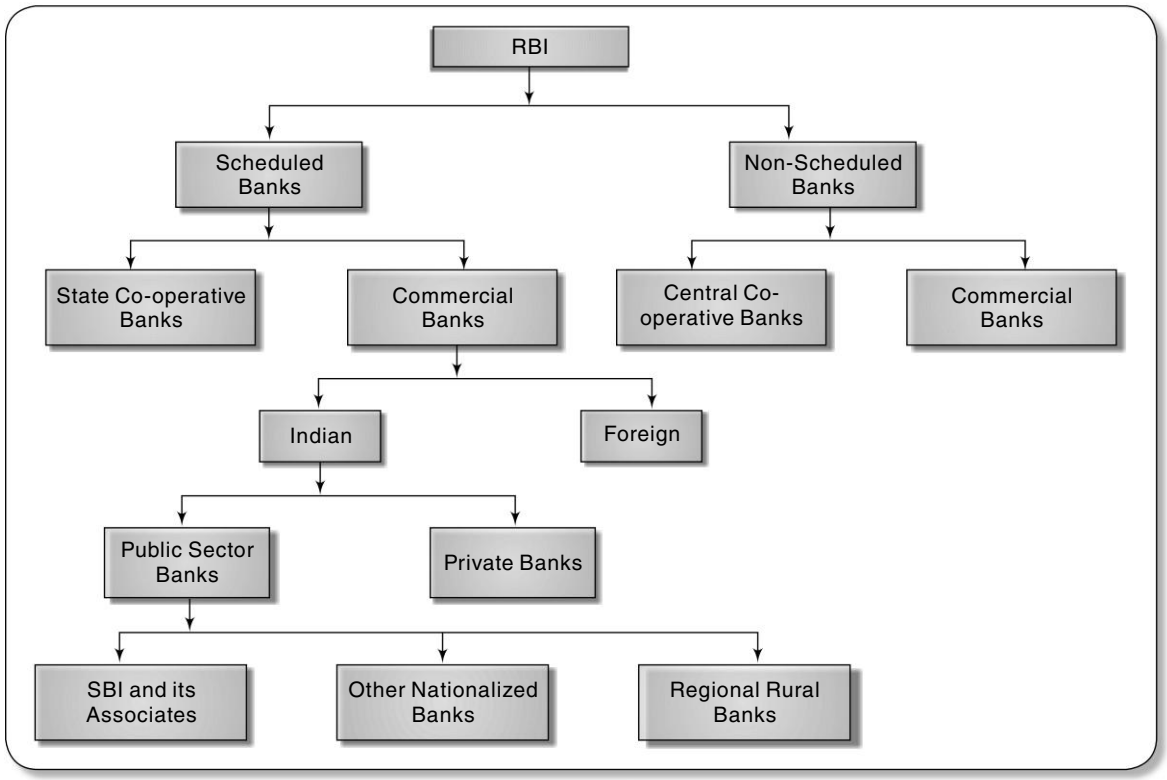

Figure 8.3 **Structure of Indian banking system.**

Table 8.4 Growth of number of banks in India

Items	*1969*	*2010*	*2011*	*2012*	*2013*	*2014*
No. of commercial banks	89	169	169	173	155	151
(a) Scheduled commercial banks	73	165	165	169	151	146
Of which: regional rural banks	–	82	82	82	64	57
(b) Non-scheduled commercial banks	16	4	4	4	4	5
Number of offices of scheduled commercial banks	8262	85393	90263	98330	105437	117280
Population per office (in thousands)	64.0	13.8	13.4	12.3	11.9	10.8
Annual average (compound) rate of number of offices 1951–2014 (*Percentage*)	**1951–1969**		**1969–1996**		**1996–2014**	**1951–2014**
	4.39		7.47		3.49	5.44

Source: RBI, RTPBI, Various Issues.

Table 8.5 Growth of overall deposits and credits of commercial banks in India

Items	*1969*	*2010*	*2011*	*2012*	*2013*	*2014*
Deposits of scheduled commercial banks in India (billion ₹)	46.46	44928.26	52079.69	59090.82	69342.80	79134.43
Credit of scheduled commercial banks in India (billion ₹)	36	32447.88	39420.82	46118.52	53931.58	61390.45
Deposits of scheduled commercial banks per office (million ₹)	5.6	526.1	577.0	600.9	657.7	674.7
Credit of scheduled commercial banks per office (million ₹)	4.4	380.0	436.7	469.0	511.5	523.5
Per capita deposits of scheduled commercial banks (₹)	88	38062	43034	48732	55445	62252
Per capita credit of scheduled commercial banks (₹)	68	27489	32574	38033	43123	48294
Credit deposit ratio (%)	77.5	72.2	75.7	78.0	77.8	77.6
Investment deposit ratio (%)	29.3	30.8	28.8	29.4	28.8	28.3
Cash deposit ratio (%)	8.2	6.8	6.7	6.1	5.6	5.4
Deposits of scheduled commercial banks as percentage of national income (NNP at factor cost, at current prices)	15.5	86.6	82.3	81.1	84.0	86.3

Annual average (compound) rate of growth of all commercial banks in India ,1951 to 2014 (*Percentage*)

Period	*Deposits*	*Credits*	*Investment in Government securities*
1951-69	10.31	9.64	7.13
1969-96	17.73	19.96	20.58
1996-2014	17.45	19.14	15.49
1951-2014	15.48	15.43	15.15

Source: RBI, RTPBI, various issues.

The average annual compound growth rate of number of offices during 1951–2014 has been 5.44 percent. Total deposits and credits have accelerated very fast during 1969–2014. The annual averages growth rate of deposits and credits have been more than 15 percent. The credit deposit ratio has been almost the same throughout the years. Deposits as a percentage of national income have increased from 15.5 percent in the year 1969 to 86.3 percent in the year 2014, which signifies the importance of commercial banks in India (Table 8.5). For both deposits and credits, the share of public sector banks has been the highest followed by the private sector banks. The contribution of public sector banks has been more than 70 percent during 1970–2014, which shows the dominant role of public sector banks for the development of the banking sector in India (Table 8.6).

Table 8.6 Share of different types of banks in total bank deposits and credit

(Percentage)

Year	*Public sector banks*		*Private sector banks*		*Foreign banks*	
	Deposit	*Credit*	*Deposit*	*Credit*	*Deposit*	*Credit*
1970	84.7	84.6	6.4	5.6	8.9	9.8
1985	92.5	92.3	6.6	4.2	2.9	3.5
2005	78.2	74.2	17.1	19.2	4.7	6.5
2007	73.9	72.7	20.5	20.6	5.6	6.4
2008	73.91	72.56	20.33	20.92	5.75	6.5
2009	76.6	75.3	23.65	19.17	5.26	5.51
2010	77.77	77.24	17.33	18.08	4.88	4.66
2011	77.85	76.89	17.85	18.55	4.28	4.54
2012	77.5	76.42	18.2	19.04	4.29	4.53
2013	77.33	76.07	18.78	19.44	3.87	4.48
2014	77.21	75.73	18.65	19.93	4.01	4.32

Source: RBI, Reports on Trends and Progress of Banking in India, various issues.

Table 8.7 reveals interesting points regarding the current geographical pattern of the banking business. There is an inverse relationship between the share of different areas in the total bank offices on the one hand and in deposits or credit on the other, this relationship being the strongest for the metropolitan area. The credit/ deposit (C/D) ratio is 66.64 percent for the rural, 58.19 percent for the semi-urban, 58.65 percent for urban and 94.77 percent for the metropolitan area in the year 2014. The drain of resources from the rural and semi-urban areas to the metropolitan area is going on even today.

Table 8.7 Regional distribution of deposits and credits (percentage to total)

Regions	*Year*	*Deposits*	*Credits*	*Credit/ Deposit*
Rural	2006	10.81	8.32	55.77
	2014	9.90	8.40	66.64
Semi-urban	2006	14.45	10.02	50.11
	2014	14.30	10.60	58.19

(*Contd.*)

Urban	2006	20.60	16.23	57.04
	2014	21.50	16.00	58.65
Metropolitan	2006	54.13	65.43	87.49
	2014	54.20	65.10	94.77
All India	2006	100.00	100.00	72.39
	2014	100.00	100.00	78.96

Source: RBI, Basic Statistical Returns of Commercial Banks in India, March 2014.

8.14 TRENDS IN ALL LIABILITIES OF COMMERCIAL BANKS IN INDIA

LO 7

Determine the trends in all liabilities and all assets of commercial banks in India

Table 8.8 below shows all types of liabilities of commercial banks in India. It is inferred from the table that deposits have the largest share followed by borrowings in total liabilities of commercial banks in India. From the table, it has been observed that the shares of capital, deposits, other liabilities and provisions have declined during the period 1997–1998 to 2013–2014. The shares of liabilities such as reserves and surplus and borrowings have increased during the said period. But it is also found that over the last 4 years the shares of all the components of liabilities of the commercial banks in India are almost stagnant. In the subsequent section, the trends in deposits and borrowings have been analysed more elaborately.

Table 8.8 Liabilities of commercial banks in India (percentage to total liabilities)

Year	*Liabilities*				
	Share capital	*Reserves and surplus*	*Deposits*	*Borrowings*	*Other liabilities and provisions*
1997–1998	2.45	4.27	80.96	3.25	9.04
2000–2001	1.47	3.75	81.48	4.27	9.00
2004–2005	1.09	5.25	78.01	7.14	8.49
2005–2006	0.90	5.67	77.70	7.29	8.43
2006–2007	0.85	5.48	77.94	7.02	8.69
2007–2008	0.92	6.36	76.74	6.99	8.96
2008–2009	0.82	6.19	77.56	9.04	6.37
2009–2010	0.80	6.33	78.87	8.70	5.27
2010–2011	0.82	6.27	78.17	9.40	5.31
2011–2012	0.76	6.54	77.55	10.14	4.98
2012–2013	0.73	6.65	77.47	10.53	4.59
2013–2014	0.69	6.65	77.83	10.04	4.77

Source: RBI, Handbook of Statistics of Indian Economy.

8.14.1 Bank Deposits

The percentage of term deposits to total deposits has increased continuously throughout the years and it has been around 67 percent in the year 2014 followed by the savings deposit (Table 8.9).

Table 8.9 Growth and structure of bank deposits in India (percentage to total deposits)

Year	*Current deposits*	*Savings deposits*	*Term deposits*	
1951	50.23	16.4	33.37	
1995	17.36	22.39	60.25	
2008	13.31	22.41	64.28	
2009	11.63	21.52	66.85	
2010	12.03	23.38	64.59	
2011	11.43	24.07	64.50	
2012	9.76	23.69	66.55	
2013	9.61	23.66	66.73	
2014	8.83	23.59	67.58	
Annual average compound rate of growth				
Periods	*Current deposits*	*Savings deposits*	*Term deposits*	*Total deposits*
1951–1969	6.01	12.63	12.68	10.14
1969–1995	16.66	17.93	16.66	18.35
1995–2008	15.00	17.38	17.96	17.37
2008–2014	9.31	18.03	18.01	17.03
1951–2014	13.17	17.59	17.98	17.27

Source: RBI, Statistical Tables Relating to Banks in India, Various Issues.

The maturity structure of bank deposits has undergone important changes during 1969–2014. It has been unstable at both of its ends (short-term and long-term), and more or less stable at the medium ranges of maturities. The share of short-term deposits (up to 1-year maturity) drastically declined from 59 percent in 1969 to 27 percent in 1994, and increased to 48 percent in 2014. On the other hand, the share of long-term deposits (maturity more than 3 years) jumped from 27 percent in 1969 to 73 percent in 1986, after which (particularly after 1991) it drastically declined and plunged to a low of 32 percent in 1994 and 22 percent in 2014. The share of deposits with maturity more than 1–3 years increased from 14 percent in 1969 to 26 percent in 2014. Thus, the policies after 1986, particularly after 1991, have discouraged the public from holding long-term deposits (Table 8.10).

Table 8.10 Maturity structure of term deposits of commercial banks

Year	*Up to 6 month*	*More than 6 months to 1 Year*	*More than 1–3 Years*	*More than 3–5 Years*	*More than 5 years and Above*
1969	20.2	39.1	14.1	20.4	6.2
1994	20.4	7.8	39.3	19.6	12.8
2005	25.46	14.64	36.46	8.40	15.44
2008	31.08	16.54	28.54	7.62	15.24
2009	31.11	17.48	28.54	7.66	13.55
2010	32.98	16.42	29.39	7.76	13.37

(*Contd.*)

2011	31.58	16.94	30.35	8.01	15.69
2012	31.84	18.13	26.32	9.36	16.53
2013	29.86	17.66	26.58	7.52	17.99
2014	31.29	17.14	26.07	7.62	15.44

Source: RBI, Statistical Tables Relating to Banks in India, Various Issues.

Table 8.11 tells us a lot regarding the ownership patterns of bank deposits. Individuals owned about 73 percent of total deposits, 31 percent of current deposits, 90 percent of savings deposits and 78 percent of term deposits in 1994. The shares of the government sector, corporate sector and other institutions in different types of deposits, and temporal changes in those shares can be gauged from Table 8.11. It shows that the ownership pattern of total deposits as well as different types of deposits has not undergone major changes over the years. Savings and term deposits, primarily asset balances, are held mostly by individuals, and current deposits, being transactions balances, are held mostly by corporations and other institutions.

Table 8.11 Ownership pattern of different types of bank deposits (percentages)

Category and year	*Government sector*	*Non-financial corporate sector*	*Financial corporate sector*	*Other institutions*	*Individuals and families*
			1994		
Current	12.3	23.4	14.0	19.7	30.7
Saving	4.5	0.6	0.6	3.9	90.5
Term	5.1	5.8	6.3	4.7	78.1
Total	6.1	7.5	6.2	7.0	73.2
			2005		
Current	15.8	22	11.3	6.6	48.2
Saving	7.2	0.5	0.7	0.6	86.1
Term	17.6	9.5	10.1	7.1	52.2
Total	14.6	8.7	7.8	5.3	60.7
			2008		
Current	14.8	24.8	16.3	5.8	40.7
Saving	8.0	0.4	0.5	0.2	85.4
Term	15.3	15.2	12.7	4.9	51.5
Total	13.5	13.0	10.3	3.9	58.1
			2009		
Current	17.6	27.5	9.1	2.4	43.7
Saving	9.1	0.4	0.8	0.0	83.6
Term	8.6	17.2	11.7	3.7	51.9
Total	14.0	14.5	8.9	2.7	58.3

(*Contd.*)

			2010		
Current	15.9	33.0	8.0	1.7	41.0
Saving	8.6	0.6	0.4	0.2	85.2
Term	15.1	17.0	14.2	4.0	50.2
Total	13.5	14.8	10.0	2.8	58.0
			2011		
Current	15.9	33.0	8.0	1.7	41.0
Saving	8.6	0.6	0.4	0.2	85.2
Term	15.1	17.0	14.2	4.0	50.2
Total	13.5	14.8	10.0	2.8	58.0
			2012		
Current	16.2	5.2	10.7	1.7	41.5
Saving	10.7	2.0	0.5	0.3	82.8
Term	15.9	5.7	12.7	3.4	51.0
Total	14.6	4.7	9.4	2.4	58.1

Source: RBI, Statistical Tables Relating to Banks in India, Various Issues. Data after 2012 is not available in this format.

Factors Affecting Composition of Bank Deposits in India

What are the factors that explain the growth and changing pattern or the composition of bank deposits in India? The following factors appear to be relevant: (a) increase in national income, (b) expansion of banking facilities in new areas and for new classes of people, (c) increase of banking habit,[9] (d) increase in the relative rates of return on deposits, (e) increase in deficit financing, (f) increase in bank credit, (g) inflow of deposits from non-resident Indians (NRIs), and (h) growth of substitutes.

(i) Changes in the nominal rather than the real income appear to have a direct and close bearing on deposits.

(ii) Deficit financing and bank credit can influence mainly the growth of current deposits.

(iii) The growth in banking habit must have caused the increase in current deposits in the organised sector, and of saving and fixed deposits in the rural sector.[10]

(iv) The increase in the number of bank branches, particularly in the hitherto unbanked areas, introduction of diverse deposit schemes catering to the diverse investment preferences of different people, vigorous sales efforts by banks and the attractive rates of interest on deposits have been the major factors in explaining the high rate of increase in deposits in general, and fixed and saving deposits, in particular.

(v) To the extent that rural population prefers fixed and saving deposits to current deposits, the increase in bank branches in rural areas may contribute to the growth of these categories of deposits.

[9]The two factors, (b) and (c) are inter-related. An increase in banking habit is caused, among other things, by the increased availability of banking facilities.

[10]The reasoning here is that for economic units in the organised sector, current deposits are substitutable for currency which was being held earlier for transactions purposes; while in rural areas, people were using currency as a saving medium and availability of banking facilities would lead them to hold saving and time deposits.

(vi) In the past many years, the inflow of NRI deposits also has been one of the contributory factors. These deposits accrue under different schemes. The various incentives offered by the government, and the higher and flexible interest rates offered on these deposits have been responsible for the inflow of substantial amounts of NRI deposits in many years.

(vii) Interest rates also significantly influence the behaviour of bank deposits. In this context, we should think in terms of the level of bank deposits rates *vis-a-vis* the rates of return on other assets. Higher return in other financial assets such as mutual fund investments, stock markets, and so on, may adversely affect the deposit behaviour of the commercial banks. The interest rates structure also influences the maturity structure of bank deposits.

In short, since (a) banks are easily accessible for rural depositors, (b) small, medium and even other savers prefer bank deposits as a medium, (c) banks have a special place in financing borrowers such as the corporates, and (d) the spread and growth of banks is relatively more conducive to a greater effectiveness of monetary policy; there is an urgent need to take effective steps to arrest 'debanking' in India, that is, to check a significant decline in the share of bank deposits in savings. A set of measures which can be of great help in this respect are as follows: (i) improvement in the customer service, (ii) improvement in the internal efficiency, and reduction in risk by reducing bad debts and frauds, (iii) increasing interest rates on term and saving deposits, (iv) raising the deposit insurance cover suitably from the present cover of ₹1 lakh, (v) offering properly graded interest rates as the maturity of deposits increases and(vi) discontinuing tax deduction at source in respect of interest income from deposits.

8.14.2 Bank Borrowings

After the deposits, borrowings have been the second major liabilities of the commercial banks in India. The share of borrowings has been increasing continuously. The major sources of borrowings of commercial banks are borrowings from abroad, borrowings from other institutions and borrowings from RBI and other banks. Two significant sources of borrowings in recent years have been subordinated debt, issued to augment their Tier II capital in the domestic capital market, and increase in foreign currency borrowings. The sharp expansion in foreign currency borrowing has been on account of various liberalisation measures, relating to the capital account for facilitating residents' foreign currency requirement for productive purposes. Flexibility given to banks to tap the source of foreign borrowings, especially for granting preshipment credit in foreign currency (PCFC)/export bills rediscounting (EBR) to exporters has been another factor contributing to higher foreign currency borrowings. Banks have also been allowed to use funds generated through buy–sell swaps in domestic forex markets for granting such loans subject to aggregate gap limit approved by the Reserve Bank. To the extent banks rely on borrowings to fund their lending operations; they are exposed to uncertainties as players in the securities market are more sensitive to interest rates and market conditions. Borrowings from the market generally also tend to be expensive than deposits and large reliance on market borrowings could erode the interest margin. However, long-term nature of such borrowings reduces liquidity risk and enables banks to finance long-term projects (Table 8.12).

Table 8.12 Components of total borrowings of commercial banks (percentage to total borrowings)

Year	*Borrowings from RBI*	*Borrowings from other banks*	*Borrowings from other institutions*	*Borrowings from abroad*
2005	0.06	13.99	43.35	42.58
2006	3.12	12.96	39.65	44.25
2007	6.26	14.60	32.49	46.63
2008	5.67	10.51	29.88	53.93
2009	2.48	4.29	50.87	42.34
2010	0.83	7.14	52.23	39.78
2011	6.7	7.28	43.43	42.57
2012	11.63	4.92	38.69	44.75
2013	12.94	4.84	35.99	46.20
2014	14.76	3.61	34.29	47.31

Source: RBI, Statistical Table Relating to Banks in India.

8.15 TRENDS IN ALL ASSETS OF COMMERCIAL BANKS IN INDIA

Among all types of assets, the share of loans and advances has been the highest followed by investments. These two components of assets constitute around 88 percent of total assets in the year 2013–2014. The proportion of loans and advances to the total assets has been increasing over the years and the share of investments has been stagnant during 2006–2007 to 2013–2014 (Table 8.13). As investments and loans and advances or bank credits are the major components of total assets of the commercial banks, the following section analyses the trends in these two items in detail.

Table 8.13 Assets of commercial banks in India (percentage to total assets)

Year	*Cash and balances with RBI*	*Balances with banks and money at call and short notice*	*Investments*	*Loans and advances*	*Fixed assets*	*Other assets*
1997–1998	9.00	7.57	34.20	40.80	1.58	6.85
2000–2001	6.53	8.18	37.99	40.59	1.25	5.47
2004–2005	5.01	4.05	36.92	48.86	0.98	4.18
2005–2006	5.19	4.18	31.10	54.45	0.90	4.18
2006–2007	5.64	4.58	27.49	57.26	0.91	4.13
2007–2008	7.47	2.52	27.21	57.25	0.98	4.56
2008–2009	5.67	3.75	27.67	57.27	0.92	4.72
2009–2010	6.07	3.04	28.53	58.04	0.82	3.49
2010–2011	6.39	2.56	26.78	59.83	0.75	3.69
2011–2012	4.49	2.93	26.85	60.97	0.68	4.08
2012–2013	3.92	3.49	27.25	61.31	0.66	3.38
2013–2014	4.30	3.71	26.30	61.43	0.69	3.57

Source: RBI, Hand Book of Statistics on Indian Economy, Various Issues.

8.15.1 Investments

Investments in government securities has accounted for around 76 percent of total investments in the year 2014. The other approved securities have accounted for below 1 percent during the said period. The share of investments made in shares, debentures, bonds and others in India has been around 22 percent and investments outside India is around 2 percent in the year 2014, which is almost stagnant since 2010. The ratio of investments in the government and other securities to the deposits of commercial banks has increased significantly, which has been much higher than mandatory statutory liquidity ratio (SLR) of 21 percent (Table 8.14).

Table 8.14 Investment by scheduled commercial banks (percentage to total investments)

Year	*Govt. securities*	*Other approved Sec*	*Shares*	*Debentures and bonds*	*Subsidiaries and joint ventures*	*Others*	*Total investment in India (1 + 2 + 3 + 4 + 5 + 6)*	*Investments outside India*
	(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*	*(8)*
2005	79.95	1.87	1.16	11.61	0.57	3.09	98.25	1.72
2006	79.22	1.60	1.27	10.22	0.74	4.54	97.59	2.38
2007	78.94	1.34	1.58	8.47	0.80	6.55	97.68	2.30
2008	78.15	0.89	1.72	7.25	1.02	8.80	97.83	2.12
2009	79.99	0.56	1.21	5.89	0.95	9.27	97.87	2.09
2010	78.57	0.30	1.44	5.00	0.85	11.98	98.14	1.82
2011	75.31	0.15	1.50	5.59	0.88	14.81	98.24	1.72
2012	77.75	0.04	1.09	5.80	0.80	12.96	98.44	1.53
2013	76.42	0.02	1.03	6.18	0.69	13.88	98.22	1.75
2014	76.39	0.01	0.88	7.85	0.70	12.20	98.03	1.94

Source: RBI, RTPBI, Various Issues.

The phenomenon of investments in government securities far in excess of statutory requirements has been due to (a) high fiscal deficit effect, (b) capital adequacy norms effect, (c) foreign exchange sterilisation effect, and (d) slack credit demand effect. All these effects are easy to understand. In spite of the brave talk of containing fiscal deficit, it has not been actually possible to reduce the deficit–GDP ratio over the past as many as 20 years. The fiscal deficit has been largely financed through public borrowings, and the banks have been the major subscribers to the government borrowing programme. Similarly, due to unprecedented and heavy increase in foreign exchange accruals, the RBI has been carrying out an intensive sterilisation programme which has resulted in a significant increase in the supply of government securities, which the banks have been purchasing. Further, all scheduled banks are required to maintain minimum capital to total risk-weighted assets ratio of 9 percent. Given the very-low-risk (riskless) nature of the government securities, banks have preferred to buy and hold substantial amount of government securities for this purpose also. Finally, due to industrial recession in the recent past, the industrial sector's credit offtake has been slack, and banks, therefore, have invested their surplus liquidity in government securities. Thus, the banks' investments in government securities cannot really be decided in terms of the ideology of public *versus* private sector. The large size of the state and the attendant enormous volume of government expenditure, the portfolio management considerations of banks, the accrual of resources to the banks, foreign capital flows, and demand

for credit, have always determined and will continue to determine the level of investment–deposit ratio of banks. Hence, it is erroneous to argue, as the RBI has done, that a large recourse of banks to gilts to invest their resources is a dissipation of 'banking knowledge capital' regarding credit appraisal, or a possibility of severing of the link between liquidity, credit, money and economic activity.

8.15.2 Bank Credits

Among these different systems of bank credit, cash credit/overdraft system remains the most important one. The shift away from it has been slow. Of the total bank credits, the outstanding cash credit and overdrafts accounted for about 57 percent in 1973, 48 percent in 1994 and 26 percent in 2014. The share of term loans has increased from 13 percent in 1973 to 83.8 percent in 2014. The share of demand loans has also increased from 6.6 percent in 1973 to 14.1 percent in 2014. The significant increase in term loans reflects the development of long-term credit market in India in terms of infrastructure financing and housing loans and so on. (Table 8.15).

Table 8.15 Types of outstanding bank credit (percentage to total bank credit)

Year	*Cash credit*	*Overdraft*	*Demand loans*	*Term loans*	*Packaging credit*	*Bills purchased/discounted (Inland and export)*	*Others*
1973	47.20	9.30	6.60	13.00	5.30	18.59	-
1994	39.90	7.70	6.40	28.50	5.30	11.70	0.50
2003	26.30	5.70	11.50	43.50	4.60	7.20	1.13
2008	16.80	4.90	10.10	60.10	3.10	4.40	0.60
2009	16.60	4.70	13.50	59.00	2.60	3.30	0.30
2010	16.60	4.30	11.30	61.20	2.60	3.70	0.30
2011	17.40	6.00	12.50	57.80	2.70	3.90	0.00
2012	19.60	6.30	10.50	56.50	2.40	4.40	0.30
2013	19.50	5.70	16.30	52.30	2.20	3.70	0.30
2014	19.60	6.30	14.10	53.80	2.40	3.60	0.20

Source: RBI, Statistical Table Relating to Banks, Various Issues.

There has been a distinct change in the outlook of both the government and the banks in respect of supply of term loans. Until 1955, commercial banks were averse to supplying term credit. The official policy endorsed the banks' attitude in this regard. The Central Banking Inquiry Committee in the 1930s had advised banks against term lending. Similarly, in 1954, the Shroff Committee appointed for financing the private sector had also advised against banks' entry into the term loans business. Today, banks have to some extent shed their reluctance to supply term loans, but, even then, the authorities insist that they should be more liberal in providing such loans.

The demand for, and supply of credits have both contributed to these changes. On the demand side, the policy of raising the rate of fixed capital formation has meant that there is a greater demand for long-term funds from both the large-scale and small-scale industrial units. Although the government has been taking steps to meet this demand by setting up special term financing institutions, banks also have been required to step in

to meet this demand partially. On the supply side, there have been favourable developments to induce banks to increase the supply of term loans in response to an increase in demand.

First, the risk aspect of term loans has been partly taken care of through credit guarantees. The evolution of the 'consortium approach' under which banks and term-lending financial institutions participate in advancing term loans has meant that banks could minimise risk in term-lending by diversifying their term loans portfolio. It has also meant that banks now have joint facilities for detailed appraisal and subsequent follow-up of projects for which loans are given. Under the consortium approach, they are in a position to share the security with other institutions on a *pari passu* basis. Second, refinancing facilities have become available to banks in respect of their term loans from other financial institutions. Third, deposits with banks have grown at a rapid rate in the recent past and the proportion of long-term deposits in total deposits has increased. Although there have been all these quantitative and attitudinal changes in respect of term loans, they have been rather slow in coming and are not adequate. Indian banks are still closer to British banks, and are far behind those in the United States and West Germany in this regard.

Table 8.16 Sectoral distribution of outstanding bank credit (percentage to total bank credit)

Year	*Food credit*	*Agriculture and allied activities*	*Industries (small medium and large)*	*Services*	*Personal loans*
2005	3.61	10.93	37.23	17.69	22.56
2006	2.58	11.02	34.86	20.24	22.83
2007	2.32	11.48	34.51	20.87	22.73
2008	1.95	12.25	38.17	24.43	23.21
2009	1.72	12.79	39.83	24.41	21.25
2010	—	13.68	43.15	23.91	19.27
2011	—	13.11	43.75	24.38	18.76
2012	1.87	12.50	44.32	23.40	17.91
2013	1.91	11.88	44.93	23.20	18.08
2014	1.62	11.85	44.77	23.79	17.96
2015	1.63	12.55	43.55	23.16	19.11

Source: RBI, Hand Book of Statistics on Indian Economy, Various Issues.

Throughout the period, the industrial sector had the largest share in bank credit. The share of personal loans was in the second position during 2005–2007, after that the share of loans given to services sector has been more than the personal loans. The share of bank credit to the agriculture and allied activities has been consistently in the third position throughout the period (Table 8.16). In terms of areawise distribution of bank credits, the share of metropolitans has been more than 50 percent during 2006–2014 followed by urban and semi-urban areas (Table 8.17).

Table 8.17 Occupational distribution of outstanding bank credit in different areas (Percentage to total bank credit)

Industries	*Rural*		*Semi Urban*		*Urban*		*Metropolitan*		*Total (All India)*	
	2006	*2014*	*2006*	*2014*	*2006*	*2014*	*2006*	*2014*	*2006*	*2014*
Agriculture	32.2	56.50	25.00	39.10	8.60	12.20	4.80	2.80	**11.41**	**13.40**
Industry	26.8	7.60	21.10	17.90	34.90	36.40	43.90	52.30	**37.40**	**41.65**
Transport	1.6	1.30	0.90	1.80	1.40	2.30	1.70	2.20	**1.57**	**2.06**
Professional and other services	2.4	2.70	3.50	4.20	4.80	7.40	6.70	8.80	**5.41**	**7.49**
Personal loans	20.6	15.70	30.70	25.80	31.40	25.10	19.90	12.10	**23.33**	**16.19**
Whole sale trade	5.9	10.00	2.70	2.20	4.50	3.80	5.60	4.30	**4.86**	**4.52**
Retail trade	5.3	4.30	8.0	6.50	6.90	7.50	3.40	3.60	**4.80**	**4.62**
Finance	0.9	0.70	0.40	0.90	1.40	3.10	10.2	11.80	**6.28**	**8.07**
Others	4.3	1.10	7.60	1.70	6.00	2.20	3.7	2.10	**4.68**	**2.01**

Source: RBI, Basic Statistical Returns of Scheduled Commercial Banks in India.

Table 8.18 shows that in terms of number of accounts, the share of household sector has been around 95 percent of the total accounts followed by private corporate sector. But the share of outstanding amount against these accounts of the private corporate sector has been in the first position during 2010–2011, but in the year 2013–2014 the share of household sector has crossed the private corporate sector. The share of public sector in total number of accounts has been below 1 percent, but its share in number of outstanding amount has been close to 20 percent in both the years. This implies that the loans given against each account in the case of household sector is quite low in comparison to private corporate and public sectors. The share of other entities like micro finance institutions, non-profit organisations and non-residents has been quite low. The percentage of priority sector lending to total credit has increased from 14 percent in the year 1969 to 33 percent in 2014 and among the priority sector lending credits to the small and medium enterprises has been in the first position followed by agricultural loans (Table 8.19).

Table 8.18 Outstanding credit to government and other sectors by scheduled commercial banks, 2010–2014

(*amount in* ₹ *crore*)

Sector	*2010–2011*		*2011–2012*		*2012–2013*		*2013–2014*	
	No. of accounts	*Amount outstanding*	*No. of accounts*	*Amount outstanding*	*No. of accounts*	*Amount outstanding*	*No. of accounts*	*Amount outstanding*
1. Public sector	6966 (0.4)	727,788 (19.7)	14882 (0.7)	841,607 (19.4)	18,182 (0.1)	901,336 (16.3)	16,739 (0.1)	1143008 (18.2)
2. Co-operative sector	5088 (0.3)	44,086 (1.2)	10,118 (0.5)	55,411 (1.3)	21,849 (0.2)	34,936 (0.6)	11,444 (0.1)	41792 (0.7)

(*Contd.*)

3. Private corporate sector	51,501 (2.8)	1,582,264 (42.9)	62,139 (2.9)	1,798,169 (41.4)	97,716 (0.8)	2,009,697 (36.4)	96,108 (0.7)	2360221 (37.6)
4. Household sector	1,758,624 (94.7)	1,303,868 (35.3)	2,039,380 (93.7)	1,608,439 (37.0)	12,491,534 (97.4)	2,463,986 (44.6)	13,538,946 (97.6)	2678649 (42.6)
5. Micro finance institutions	32,299 (1.7)	15,397 (0.4)	42,808 (2.0)	15,594 (0.4)	181,066 (1.4)	91,305 (1.7)	198,607 (1.4)	31750 (0.5)
6. Non-profit institutions serving households	1990 (0.1)	17,241 (0.5)	6549 (0.3)	21,259 (0.5)	17,752 (0.1)	19,774 (0.4)	10,303 (0.1)	19506 (0.5)
7. Non residents	452 (0.0)	1112 (0.0)	1114 (0.1)	6163 (0.1)	526 (0.0)	4278 (0.1)	2937 (0.0)	7154 (0.1)
Total	1856928 (100)	3,691,758 (100)	2,176,992 (100)	4,346,645 (100)	12,828,629 (100)	5,525,317 (100)	13,875,088 (100)	6282082 (100)

Note: The figures in the brackets show the percentage to the total.
Source: RBI, Basic Statistical Returns of Scheduled Commercial Banks in India, Various Issues.

Table 8.19 Scheduled commercial banks' credit to priority sectors

Year	*Share in total credit*	*Share in total non food credit*	*Agricultural lending*	*Micro and small entp.*	*Micro credit*	*Education loan*
1969	14.00	15.00	—	—	—	—
1994	36.50	38.80	—	—	—	—
2000	35.40	37.40	—	—	—	—
2005	36.7	38.10	11.9	9.7	-	-
2008	33.27	33.93	12.49	11.43	0.60	0.88
2009	35.22	35.84	13.02	11.88	0.64	1.07
2010	35.93	35.93	13.68	12.29	0.72	1.19
2011	34.42	34.42	13.11	12.08	0.52	1.16
2012	32.51	33.13	12.74	11.62	0.37	1.12
2013	31.02	31.62	12.11	11.55	0.34	1.08
2014	32.55	33.09	12.04	12.80	0.31	1.05
2015	32.94	33.49	12.76	13.33	0.29	0.99

Source: RBI, Hand Book of Statistics on Indian Economy, Various Issues.

8.15.3 Changes in Maturities of Bank Loans and Deposits

There have been certain notable changes in the relative maturities of bank loans and deposits over the years. As discussed earlier, during 1970s and 1980s, the proportion of long-term deposits in the total bank deposits had increased considerably. There has also been an increase in the share of term loans in the total bank credit since bank nationalisation. However, the increase in the former was higher than that in the latter unil the end of the 1980s. As a result, a 'temporal gap' in bank lending had emerged for quite some time. Since 1990, this

gap has been considerably bridged because of a significant decline in the share of long-term deposits. A more growth-oriented development would have been the bridging of temporal gap through the maintenance of the share of long-term deposits and a further increase in the share of term loans.

Table 8.20 presents useful and latest information on the point of 'temporal gap' in respect of different types of banks and all the commercial banks taken together. Unlike in the past, the average maturity period of deposits of all the banks has declined; their deposits with maturity of a year or less were 47 percent of the total deposits, their loans and advances with maturity up to 1 year have been 43 percent in the year 2014–2015. Deposits with maturity of 1–3 years and 3–5 years were less than the loans and advances with the same maturity.

Table 8.20 All India and bank group wise maturity profile of select liabilities and assets (percentages)

	Public sector banks					
Liabilities and Assets	*2003*	*2011*	*2012*	*2013*	*2014*	*2015*
Deposits		100	100	100	100	100
Upto 1 year		48.23	49.61	47.19	49.63	47.49
Over 1–3 years		28.62	25.27	26.27	25.24	26
Over 3–5 years		8.07	8.55	9.43	6.70	7.63
Over 5 years		15.08	16.57	17.11	18.43	18.88
Borrowings		100	100	100	100	100
Upto 1 year		39.90	45.41	51.20	54.52	52.98
Over 1–3 years		12.47	12.21	13.95	14.49	13.02
Over 3–5 years		12.33	15.21	11.02	10.24	13.78
Over 5 years		35.30	27.17	23.83	20.75	20.22
Loans and Advances		100	100	100	100	100
Upto 1 year		36.01	34.25	34.97	33.72	33.95
Over 1–3 years		36.25	37.37	36.78	37.35	38.86
Over 3–5 years		10.95	11.03	11.06	10.95	10.72
Over 5 years		16.79	17.35	17.19	17.98	16.46
Investments (at book value)		100	100	100	100	100
Upto 1 year		18.10	20.07	19.27	15.71	15.94
Over 1–3 years		12.70	12.58	13.25	13.34	13.94
Over 3–5 years		14.36	14.20	15.08	18.44	18.24
Over 5 years		54.84	53.15	52.40	52.51	51.88
		Private sector banks				
Liabilities and Assets		*2011*	*2012*	*2013*	*2014*	*2015*
Deposits		100	100	100	100	100
Upto 1 year		46.00	48.71	46.00	42.66	39.20
Over 1–3 years		38.63	29.98	27.37	26.22	27.29

(*Contd.*)

Over 3–5 years	6.09	5.65	9.08	11.00	10.68
Over 5 years	9.28	15.66	17.55	20.12	22.83
Borrowings	100	100	100	100	100
Upto 1 year	42.41	50.27	45.91	41.80	43.75
Over 1–3 years	16.17	11.85	14.39	22.44	23.92
Over 3–5 years	9.83	12.48	14.04	11.99	9.38
Over 5 years	31.59	25.40	25.66	23.77	22.95
Loans and Advances	100	100	100	100	100
Upto 1 year	37.60	35.16	35.09	33.41	31.66
Over 1–3 years	36.44	37.05	36.78	35.75	38.88
Over 3–5 years	11.42	11.34	11.65	12.37	11.08
Over 5 years	14.54	16.45	16.48	18.47	18.38
Investments (at book value)	100	100	100	100	100
Upto 1 year	36.60	42.62	41.80	39.06	44.52
Over 1–3 years	22.69	17.28	18.23	17.41	15.48
Over 3–5 years	9.99	9.14	9.83	10.71	9.64
Over 5 years	30.72	30.96	30.09	32.82	30.36
	Foreign banks				
Liabilities and Assets	*2011*	*2012*	*2013*	*2014*	*2015*
Deposits	100	100	100	100	100
Upto 1 year	63.70	61.86	61.53	51.91	54.67
Over 1–3 years	27.35	29.76	29.02	40.71	38.08
Over 3–5 years	8.92	8.30	9.39	7.33	7.20
Over 5 years	0.03	0.08	0.06	0.05	0.05
Borrowings	100	100	100	100	100
Upto 1 year	78.77	84.55	89.47	87.78	87.96
Over 1–3 years	14.75	9.19	6.06	6.71	8.68
Over 3–5 years	2.07	2.72	2.67	5.43	3.31
Over 5 years	4.41	3.54	1.80	0.08	0.05
Loans and Advances	100	100	100	100	100
Upto 1 year	68.07	67.17	63.50	63.15	63.73
Over 1–3 years	16.96	15.47	17.35	18.43	18.32
Over 3–5 years	4.24	4.84	6.74	5.64	5.92
Over 5 years	10.73	12.52	12.41	12.78	12.03
Investments (at book value)	100	100	100	100	100
Upto 1 year	79.90	76.69	77.96	80.33	79.57
Over 1–3 years	14.21	12.94	11.00	11.37	12.67
Over 3–5 years	3.38	5.16	3.54	2.49	2.13
Over 5 years	2.54	5.21	7.50	5.81	5.63

Source: RBI, RTPBI, Various Issues.

The 'temporal gap' has become more complex, but, on the whole, it can be said that the mild 'temporal gap' still exists. Further, the current temporal gap is the reverse of the earlier temporal gap, that is, while in the earlier years, long-term deposits financed short-term loans, now relatively short-term deposits finance long-term loans. The banks' investments are clustered in the maturities of above 5 years and up to 1 year. Thus, the banks prefer either long-term investments or short-term investments, which is followed by preference for maturity of 1–3 years and that of 3–5 years in that order. The borrowings of banks are overwhelmingly of short-term maturity. There are significant differences in the preferences of different types of banks in respect of the maturities of their assets and liabilities. For example, the proportion of deposits with maturity period of less than 1 year is much higher in the case of foreign banks followed by public sector and private sector banks. In the case of foreign banks, their loans, borrowings and investments also are overwhelmingly of short-term nature.

8.16 NPAS AND CLASSIFICATIONS OF ASSETS OF INDIAN COMMERCIAL BANKS

Tables 8.21 and 8.22 present rich and useful information on different measures of NPAs of different types of banks and classifications of different loan assets. It appears that all these ratios have declined during the period 2000–2001 to 2011–2012 and there have been slight increase in these ratios during the period 2012–2013 to 2013–2014. The data on loan asset categories suggest further improvement in the asset quality of all SCBs during the period 2000– 2012. There was a slight decline in the trend in the year 2013. The share of 'sub-standard' loans has also declined from 4.1 percent in the year 2000 to 1 percent in the year 2011 and again it has increased to 1.5 percent in the year 2013. The same trend has been observed for doubtful assets, and for loss assets it has declined from 1.6 to 0.2 percent during the above-mentioned period. For public sector banks, we have observed the similar trend as it is observed in the case of all scheduled commercial banks. For private sector banks, the share of standard assets has increased and the shares of substandard, doubtful and loss assets have declined continuously. For foreign banks, the trends in all types of assets are same with the all scheduled commercial banks.

Table 8.21 NPAs in different types of scheduled commercial banks

	Scheduled commercial banks			
Year	*GNPA/ADV*	*GNPA/TA*	*NNPA/ ADV*	*NNPA/ TA*
2000–2001	11.4	4.9	6.2	2.5
2005–2006	3.3	1.8	1.2	0.7
2009–2010	2.4	1.4	1.1	0.6
2010–2011	2.5	1.4	1.1	0.6
2011–2012	3.1	1.7	1.3	0.8
2012–2013	3.2	2.0	1.7	1.0
2013–2014	3.8	2.4	2.1	1.3

(*Contd.*)

Year	Public sector banks				Old private sector banks			
	GNPA/ADV	GNPA/TA	NNPA/ADV	NNPA/TA	GNPA/ADV	GNPA/TA	NNPA/ADV	N N P A / TA
2000–2001	12.4	5.3	6.7	2.7	10.8	5.2	7.1	3.3
2005–2006	3.6	2.1	1.3	0.7	6.0	3.1	2.7	1.4
2009–2010	2.2	1.3	1.1	0.7	2.4	1.3	0.9	0.5
2010–2011	2.4	1.4	1.2	0.7	2.3	1.3	0.8	0.5
2011–2012	3.3	2.0	1.5	1.0	1.9	1.2	0.5	0.3
2012–2013	3.6	2.4	2.0	1.3	1.8	1.1	0.6	0.4
2013–2014	4.4	2.9	2.6	1.6	1.9	1.2	0.7	0.5
Year	New private sector banks				Foreign banks			
	GNPA/ADV	GNPA/TA	NNPA/ADV	NNPA/TA	GNPA/ADV	GNPA/TA	NNPA/ADV	NNPA/TA
2000–2001	5.1	2.1	3.1	1.2	7.0	3.2	2.4	1.0
2005–2006	1.7	1.0	0.8	0.4	2.8	1.4	0.8	0.4
2009–2010	2.9	1.6	1.1	0.6	3.8	1.5	1.8	0.7
2010–2011	2.7	1.3	0.6	0.3	4.3	1.6	1.8	0.7
2011–2012	2.2	1.1	0.4	0.2	2.5	1.0	0.6	0.3
2012–2013	1.8	1.0	0.4	0.3	2.7	1.1	0.6	0.2
2013–2014	1.8	1.1	0.7	0.4	3.0	1.3	1.0	0.4

Notes: GNPA = gross non-performing assets, ADV = gross advances, TA = total assets
Source: RBI, Handbook of Statistics of Indian Economy.

Table 8.22 Classifications of different loan assets of different types of scheduled commercial banks

Year	Scheduled commercial banks				Public sector banks			
	SA	SSA	DA	LA	SA	SSA	DA	LA
2000	87.2	4.1	7.1	1.6	86.0	4.3	8.0	1.7
2005	94.9	1.2	3.3	0.6	94.6	1.2	3.4	0.7
2010	97.4	1.2	1.0	0.2	97.72	1.10	0.98	0.20
2011	97.6	1.0	1.1	0.2	97.68	1.10	1.04	0.18
2012	97.0	1.4	1.2	0.2	96.83	1.70	1.33	0.14
2013	96.5	1.5	1.6	0.2	96.16	1.89	1.81	0.14
Year	Private sector banks				Foreign banks			
	SA	SSA	DA	LA	SA	SSA	DA	LA
2000	91.5	3.7	4.0	0.8	93.0	2.9	2.1	1.9
2005	96.1	1.0	2.5	0.4	97.0	0.9	1.3	0.8
2010	97.03	1.48	1.12	0.3.7	95.74	2.94	0.86	0.45
2011	97.55	0.60	1.46	0.39	97.46	0.94	1.06	0.55
2012	97.92	0.58	1.17	0.33	97.32	0.89	0.95	0.84
2013	98.09	0.56	1.06	0.29	97.03	1.07	1.02	0.87

Note: SA = Standard Assets, SSA= Sub Standard Assets, DA= Doubtful Assets and LA= Loss Assets
Source: RBI, Handbook of Statistics of Indian Economy.

8.17 COMMERCIAL BANK PERFORMANCES IN INDIA

LO 8

Show how commercial banks perform in India and what has been their Capital Adequacy Ratio

When commercial banks were nationalised, one of the arguments for doing so was that the profits made by banks should be available to the government for its developmental expenditure. At the same time, the nationalisation had a wider social purpose. In fact, since about the middle of the 1960s, commercial banks' role has not been perceived in purely commercial terms. Against this background, how have the banks performed over the years, particularly since 1991?

Table 8.23 shows the structure of their earnings and expenses. Interest earnings are the mainstay of banks, and have accounted for 80–89 percent of banks' total earnings during 1951–2014. The two major sources of interest income are income on advances and income on investments. The second component of banks' total income is the income generated by fee-based activities such as commission, brokerage, profit on sale of land, income from exchange transactions and so on. The third component of total income is the trading income, that is, profits from the sales of investments, particularly investments in government securities. On the expenditure side, interest and establishment expenses have been the major items. It is seen from Table 8.23 that the net earnings have been positive and increased continuously throughout the period.

Table 8.23 Earnings and expenses of commercial banks in India

Year	*Interest earnings (% to total income)*	*Earnings from other sources (% to total income)*	*Interest expenses (% to total expenses)*	*Establishment expenses (% to total expenses)*	*Other expenses (% to total expenses)*	*Net earnings (₹ crore)*
			32.3	48.4	19.3	14
1969	84.5	15.5	50.1	37.2	12.7	48
1991	90.5	9.5	64.0	25.6	10.4	743
1998	86.14	13.83	63.62	26.52	10.04	6522
1999	87.56	12.43	63.87	26.58	9.54	4826
2000	86.54	13.45	64.33	25.62	10.03	7802
2001	87.31	12.68	62.47	27.22	10.30	7100
2002	84.06	15.93	62.75	24.15	13.09	11576
2003	81.63	18.36	60.27	24.52	15.19	17077
2004	78.50	21.49	54.18	27.04	18.76	22298
2005	81.89	18.10	52.62	29.61	17.76	20959
2006	87.97	16.02	54.62	30.17	15.19	24582
2007	85.90	14.09	57.76	27.06	14.16	31202
2008	83.62	16.37	63.77	23.69	12.52	42727

(*Contd.*)

2009	83.77	16.22	64.05	21.79	14.14	52750
2010	83.96	16.03	62.21	22.87	14.91	57110
2011	86.02	13.97	59.68	24.58	15.73	70332
2012	88.35	11.64	65.20	20.84	13.94	81658
2013	88.64	11.35	64.97	20.33	12.95	91165
2014	88.22	11.77	66.70	20.54	14.48	80904

Source: RBI statistical tables relating to banks, RBI, Reports on Trends and Progress of banking India, Various issues.

The various costs and earnings ratios (Table 8.24) show that the cost of deposits increased from 1951 to 1989 and declined up to 2007, and further it has increased. The movements in the cost of deposits reflect the average rate at which different deposits are contracted rather than the movement in deposit interest rates as such. The cost of borrowings, however, moved up somewhat due mainly to tightening of liquidity conditions in the market. Both the returns on loans and on investments have shown the fluctuating trend over the years. The net interest income to total assets ratio has remained more or less the same at about 2–3 percent during the 62-year period.

Table 8.24 Performance indicators of commercial banks (percentages)

Year	*Cost of deposit*	*Return on loans*	*Return on investment*	*Interest income to total asset*	*Interest expended to total assets*	*Net interest income to total assets*
1951	0.9	4.5	2.6	2.9	0.8	2.1
1970	3.4	7.2	3.5	5.4	2.7	2.7
1989	8.0	12.8	4.2	9.0	6.1	2.9
1996	6.9	12.3	11.2	9.4	6.2	3.2
2003	6.45	9.41	11.39	8.28	5.51	2.77
2004	4.9	8.1	8.2	7.29	4.43	2.86
2005	4.2	7.2	6.1	6.61	3.78	2.83
2006	4.1	7.2	7.7	6.65	3.85	2.81
2007	4.4	7.9	6.9	6.7	4.12	2.58
2008	5.4	8.9	6.6	7.16	4.81	2.35
2009	6.24	10.5	7.01	7.4	5	2.4
2010	5.49	9.29	6.59	7.37	4.83	2.54
2011	5.01	9.18	6.79	7.44	4.52	2.92
2012	6.28	10.42	7.52	8.45	5.55	2.9
2013	6.57	10.33	7.57	8.53	5.74	2.79

Notes: (1) Cost of Deposit = Interest Paid on Deposit/Deposits, (2) Return on Loans = Interest earned on loans/Total loans, (3) Return on Investment = Interest earned on Investment/Investments
Source: RBI statistical tables relating to banks, RBI, Reports on Trends and Progress of banking India, Various issues.

For all scheduled commercial banks, both ROA and ROE have continuously declined during 2007–08 to 2013–2014, which imply that profitability of the commercial banks has reduced in this period. Although there has been a slight increase in NIM in the year 2010–2011, further again it has declined during the period 2012–2013 to 2013–2014. The spread between interest income and interest expenses has also declined from 3.28 percent in the year 2010–2011 to 3.06 percent in the year 2013–2014. Across the all types of the banks, the foreign banks have performed better than the private and all nationalised banks (Table 8.25)

Table 8. 25 Various performance ratios for different types of banks

(*Percentage*)

Year	*ROA*	*ROE*	*NIM*	*II*	*IE*	*Spread*
All schedule commercial banks						
2007–2008	1.12	15.98	2.58	7.92	4.8	3.12
2008–2009	1.13	15.44	2.62	8.12	5.02	3.1
2009–2010	1.05	14.31	2.54	7.37	4.51	2.86
2010–2011	1.1	14.96	2.91	7.44	4.16	3.28
2011–2012	1.08	14.6	2.9	8.45	5.17	3.28
2012–2013	1.04	13.84	2.79	8.53	5.35	3.18
2013–2014	0.81	10.68	2.7	8.32	5.26	3.06
Nationalised banks						
2007–2008	1.01	17.09	2.28	7.83	5.02	2.81
2008–2009	1.03	18.05	2.32	8.18	5.29	2.89
2009–2010	1.00	18.3	2.26	7.55	4.81	2.74
2010–2011	1.03	18.19	2.74	7.62	4.44	3.18
2011–2012	0.88	15.05	2.55	8.57	5.61	2.96
2012–2013	0.74	12.34	2.39	8.53	5.74	2.79
2013–2014	0.45	7.76	2.28	8.27	5.59	2.68
Private sector banks						
2007–2008	1.13	13.43	2.67	8.42	5.15	3.27
2008–2009	1.13	11.38	2.86	8.65	5.54	3.11
2009–2010	1.28	11.94	2.9	7.6	4.44	3.16
2010–2011	1.43	13.7	3.1	7.59	4.08	3.51
2011–2012	1.53	15.25	3.09	8.71	5.12	3.59
2012–2013	1.63	16.46	3.22	9.04	5.38	3.66
2013–2014	1.65	16.22	3.31	8.9	5.26	3.64
Foreign banks						
2007–2008	2.09	16.05	4.33	7.65	2.91	4.74
2008–2009	1.99	13.75	4.33	7.49	2.87	4.62
2009–2010	1.28	7.34	3.96	5.99	2.05	3.94
2010–2011	1.75	10.28	3.86	6.15	2.16	3.99

(*Contd.*)

2011–2012	1.76	10.79	3.89	6.67	2.54	4.13
2012–2013	1.92	11.53	3.83	6.89	2.93	3.96
2013–2014	1.57	9.02	3.57	6.66	2.88	3.78

Source: RBI, Statistical Table Relating to Banks, Various Issues
Notes: ROA = Return on Assets, ROE = Return on Equity, NIM = Net Interest Margin, II= Interest Income to Total Assets, IE = Interest Expenses to Total Assets, Spread = Interest Income – Interest Expenses

8.18 CAPITAL ADEQUACY RATIO OF COMMERCIAL BANKS IN INDIA

The capital adequacy ratio of all the scheduled commercial banks has been above the regulatory limit (9 percent) during the period 1999–2000 to 2013–2014, which implies the stability of the commercial banks in India. It is observed that the capital adequacy ratio of the foreign banks has been more than the private and public sector banks throughout the period (Table 8.26).

Table 8.26 Capital adequacy ratio of commercial banks in India

Year	*Scheduled commercial banks*	*Public sector banks*	*Private sector banks*	*Foreign banks*	*Nationalised banks*
1999–2000	11.10	10.70	12.23	11.90	10.10
2000–2001	11.40	11.20	12.20	12.60	10.20
2001–2002	12.00	11.80	11.60	12.90	10.90
2002–2003	12.70	12.60	12.14	15.00	12.20
2003–2004	12.90	13.20	12.16	15.00	13.10
2004–2005	12.80	12.90	13.77	14.00	13.20
2005–2006	12.30	12.20	12.59	13.00	12.30
2006–2007	12.30	12.40	12.29	12.40	12.40
2007–2008	13.10	12.50	12.31	13.00	12.10
2008–2009	14.00	13.50	13.47	14.30	13.20
2009–2010	14.50	13.30	14.45	17.30	13.20
2010–2011	14.20	13.10	15.33	17.00	13.50
2011–2012	14.20	13.20	14.62	16.70	13.00
2012–2013	13.80	12.30	14.26	17.80	12.20
2013–2014	13.71	12.25	14.18	17.67	12.18

Source: RBI, RTPBI, Various Issues.

8.19 GROWTH OF REGIONAL RURAL BANKS (RRBs) IN INDIA

LO 9

Discuss the growth of Regional Rural Banks and Basel norms for banking supervision in India

Regional Rural Banks (RRBs) were established in 1975 under the provisions of the ordinance promulgated on 26 September, 1975 and followed by Regional Rural Banks Act, 1976 with a view to develop the rural economy and to create a supplementary channel to the 'cooperative credit structure' with a view to enlarge institutional credit for the rural and agriculture sector. The Government of India, the concerned state government and the bank, which had sponsored the RRB contributed to the share capital of RRBs in proportion of 50, 15 and 35 percent, respectively. The area of operation of the RRBs is limited to notified few districts in a state. The RRBs mobilise deposits primarily from rural/semi-urban areas and provide loans and advances mostly to small and marginal farmers, agricultural labourers, rural artisans and other segments of priority sector. The RBI in 2001 constituted a committee under the Chairmanship of Dr. V. S. Vyas on 'Flow of Credit to Agriculture and Related Activities from the Banking System' which examined relevance of RRBs in the rural credit system and the alternatives for making it viable. The consolidation process thus was initiated in the year 2005 as an off-shoot of Dr. Vyas Committee Recommendations. First phase of amalgamation was initiated sponsor bank-wise within a state in 2005 and the second phase was across the sponsor banks within a state in 2012. The process was initiated with a view to provide better customer service by having better infrastructure, computerisation, experienced work force, common publicity and marketing efforts and so on. The amalgamated RRBs also benefit from larger area of operation, enhanced credit exposure limits for high value and diverse banking activities. As a result of amalgamation, number of the RRBs has reduced from 196 to 64 as on 31 March, 2013. The number of branches of RRBs increased to 17,856 as on 31 March, 2013 covering 635 districts throughout the country.[11] Table 8.27 presents the present profile of the RRBs during the period 2001–2002 to 2012–2013.

Table 8.27 Present profiles of regional rural banks in India

(Amount in ₹ crore: Ratios are percentages)

Sl No	*Item*	*2001–2002*	*2005–2006*	*2010–2011*	*2011–2012*	*2012–2013*
1	Total assets	56,804	89,645	215,359	242,500	275,800
2	Total liability	45,061	89,645	215,359	242,500	275,800
3	Aggregate deposit	43,220	71,329	166,232	186,300	208,500
4	Bank credit	18,373	39,712	94,715	113,000	130,900
5	Investments	6772	24,925	55,280	60,200	62,000
6	Credit–deposit ratio	42.5	55.7	56.97	60.65	62.78
7	Investment–deposit ratio	15.7	57.7	33.25	32.31	29.73
8	Credit + investment – deposit ratio	58.2	113.4	90.22	92.96	92.51
9	Operating profit ratio	1.4	1.04	1.3	1.4	1.4

(*Contd.*)

[11] www.nabard.org/English/rrbs.aspx

10	Net profit ratio	1.1	0.69	0.9	0.8	0.8
11	Income ratio	9.8	7.3	7.5	8.8	8
12	Interest income ratio	9.1	6.82	7.1	8.3	7.5
13	Other income ratio	0.7	0.48	0.5	0.5	0.5
14	Expenditure ratio	8.7	6.61	6.6	7.9	7.2
15	Interest expended ratio	5.9	3.64	4	4.9	4.5
16	Operating expenses ratio	2.6	2.63	2.3	2.4	2.1
17	wage bill ratio	2.2	2.06	1.6	1.7	1.5
18	provisions and contingencies ratio	0.3	0.35	0.3	0.6	0.6

Note: Ratio from 9 to 19 are percentages to total assets.
Source: RBI, RTPBI, Various Issues.

8.20 BASEL NORMS FOR BANKING SUPERVISION

The Basel Committee on Banking Supervision has its origin in the financial market turmoil that followed the breakdown of the Bretton Woods system of managed exchange rates in 1973. After the collapse of Bretton Woods, many banks incurred large foreign currency losses. In response to this and other disruptions in the international financial markets, the central bank governors of the G10 countries established a committee on banking regulations and supervisory practices at the end of 1974. Later renamed the Basel Committee on Banking Supervision (BCBS), the Committee was designed as a forum for regular cooperation between its member countries on banking supervisory matters. Its aim is to enhance financial stability by improving supervisory knowhow and the quality of banking supervision worldwide. The committee seeks to achieve its aims by setting minimum standards for the regulation and supervision of banks; by sharing supervisory issues, approaches and techniques to promote common understanding and to improve cross-border cooperation; and by exchanging information on developments in the banking sector and financial markets to help identify current or emerging risks for the global financial system.

8.20.1 Basel I

In the late 1980s, BCBS formulated the first accord on bank regulation by developing a risk-based capital adequacy standard. This resulted in the introduction of '*The International Convergence of Capital Measurements and Capital Standard'* popularly known as the Basel-I Capital Accord of 1988, which has primarily focused on credit risk of banks. Basel-I accord consists of four-pillars explained as follows:

(i) **Constituents of capital:** *Tier 1 capital* consisting of (a) paid-up share capital/common stock and (b) disclosed reserves and *Tier 2 capital* consisting of undisclosed reserves, revaluation reserves, general provisions/general loan-loss reserves, hybrid debt capital instruments and subordinated term debt.

(ii) **Risk weighting system:** *The risk weights* include only five weights: 0, 10, 20, 50 and 100 percent. There are predictably simple broad-brush judgments in deciding which weight should apply to different types of asset, and the weightings should not be regarded as a substitute for commercial judgment for the purpose of market pricing of the different instruments.

(iii) **The target standard ratio:** *A target standard ratio* is the ratio of capital to weighted risk assets set at 8 percent (of which the core capital element has to be at least 4 percent). Unambiguously, a supervisory framework was devised based on the common standard of risk assessment. All the banks have to maintain a certain minimum fixed capital ratio, which is popularly known as Basel capital adequacy ratio where Basel capital adequacy ratio = Total Capital/Risk Weighted Asset.

(iv) **Transitional and implementation arrangements:** Certain transitional arrangements were agreed upon to ensure that there are sustained efforts during the transitional period to build up individual banks' ratios towards the ultimate target standard and to facilitate smooth adjustment and phasing in of the new arrangements within a wide variety of existing supervisory systems.

Basel-I Accord of 1988 was incredibly successful with more than 100 countries accepting it as a benchmark. Undoubtedly, the Accord played an outstandingly significant role in providing infrastructural support for the stability of the international financial system. It had established a new framework for banks in managing their credit risk. But Basel-I is static and not easily adaptable to new banking activities and risk management techniques. It was centred on credit risk ignoring other important risks *viz.*, operation risk and market risk and so on.

8.20.2 Basel II

In response to the banking crises of the 1990s and the above-mentioned criticisms of Basel I, the Basel Committee decided in 1999 to propose a new, more comprehensive capital adequacy accord. This accord is formally known as 'A Revised Framework on International Convergence of Capital Measurement and Capital Standards' and informally as 'Basel II'. While maintaining the 'pillar' framework of Basel I, each pillar is greatly expanded in Basel II to cover new approaches to credit risk, adapt to the securitisation of bank assets, cover market, operational and interest rate risk, and incorporate market-based surveillance and regulation. Basel II consists of three pillars:

(i) **Minimum Capital Requirements:** Basel II creates a more sensitive measurement bank's risk-weighted assets and tries to eliminate the loopholes in Basel I that allow banks to take on other risks like market risk as well as operational risk while maintaining the minimum capital adequacy requirements. In other words, the banks should measure the risk-weighted assets providing the due weightage to the three types of risks such as credit risk, market risk and operational risk.

(ii) **Supervisory Review Process:** It is basically intended to ensure that the banks should have enough capital bases to support all the risks associated with the banks' business process. The banks can choose from a menu of approaches to measure the credit, market and operational risks. This process of choosing the approach requires the review of the availability of the minimum requirements to implement the approach.

(iii) **Market Discipline:** Disclosure of a bank's capital and risk-taking positions are recommended to be released to the general public. Statistics such as the aggregate amount of surplus capital (both Tier 1 and Tier 2) held by a bank, risk-weighted capital adequacy ratios, reserve requirements for credit, market and operational risk, and a full description of the risk mitigation approaches of a bank are recommended for quarterly release to the general public.

8.20.3 Basel III

'Basel III' is a comprehensive set of reform measures, developed by the Basel Committee on Banking Supervision to strengthen the regulation, supervision, and risk management of the banking sector. These measures aim to (i) improve the banking sector's ability to absorb shocks arising from financial and economic stress, whatever the source, (ii) improve risk management and governance, and (iii) strengthen banks' transparency and disclosures. Basel III was developed by the Basel Committee on Banking Supervision in 2010–2011 and was scheduled to be introduced from 2013. The *major changes Proposed in Basel III* are as follows:

(i) **Better Capital Quality:** Introduction of much stricter definition of capital. Better quality capital means the higher loss-absorbing capacity. Greater focus on common equity.

(ii) **Capital Conservation Buffer:** Banks will be required to hold a capital conservation buffer of 2.5 percent. The objective of asking to build conservation buffer is to ensure that banks maintain a cushion of capital that can be used to absorb losses during periods of financial and economic stress.

(iii) **Countercyclical Buffer:** The countercyclical buffer has been introduced with the objective to increase capital requirements in good times and decrease the same in bad times. The buffer will slow banking activity when it overheats and will encourage lending when times are tough, that is, in bad times. The buffer will range from 0 to 2.5 percent, consisting of common equity or other fully loss-absorbing capital.

(iv) **Minimum Common Equity and Tier 1 Capital Requirements:** The minimum requirement for common equity, the highest form of loss-absorbing capital, has been raised under Basel III from 2 to 4.5 percent of total risk-weighted assets. The overall Tier 1 capital requirement, consisting of not only common equity but also other qualifying financial instruments, will also increase from the current minimum of 4 to 6 percent. Although the minimum total capital requirement will remain at the current 8 percent level, yet the required total capital will increase to 10.5 percent when combined with the conservation buffer.

(v) **Leverage Ratio:** Basel III norms include a leverage ratio to serve as a safety net. A leverage ratio is the relative amount of capital to total assets (not risk-weighted). This aims to put a cap on swelling of leverage in the banking sector on a global basis. Three percent leverage ratio of Tier 1 will be tested before a mandatory leverage ratio is introduced in January 2018.

(vi) **Liquidity Ratios:** Under Basel III, a framework for liquidity risk management will be created. A new liquidity coverage ratio (LCR) and net stable funding ratio (NSFR) are to be introduced in 2015 and 2018, respectively.

(vii) **Systemically Important Financial Institutions (SIFI):** As part of the macro-prudential framework, systemically important banks will be expected to have loss-absorbing capability beyond the Basel III requirements. Options for implementation include capital surcharges, contingent capital and bail-in-debt.

Table 8.28 Comparison of capital requirements under Basel II and Basel III

Requirements	*Under Basel II*	*Under Basel III*
Minimum ratio of total capital to RWAs	8%	10.50%
Minimum ratio of common equity to RWAs	2%	4.50–7.00%
Tier I capital to RWAs	4%	6.00%
Core Tier I capital to RWAs	2%	5.00%
Capital conservation buffers to RWAs	None	2.50%
Leverage ratio	None	3.00%
Countercyclical buffer	None	0–2.50%
Minimum liquidity coverage ratio	None	Yes
Minimum net stable funding ratio	None	Yes
Systemically important financial institutions charge	None	Yes

The Basel III which is to be implemented by banks in India as per the guidelines issued by RBI from time to time will be challenging task not only for the banks but also for GOI. It is estimated that Indian banks will be required to raise ₹600,000 crores in external capital in next 9 years, that is, by 2020. Expansion of capital to this extent will affect the returns on the equity of these banks especially for public sector banks. However, only consolation for Indian banks is the fact that historically they have maintained their core and overall capital well in excess of the regulatory minimum.

8.21 RISK MANAGEMENT IN BANKING

LO 10
Summarise risk management in banking

Risk management in bank operations includes risk identification, measurement and assessment, and its objective is to minimise negative effects risks can have on the financial result and capital of a bank. Banks are, therefore, required to form a special organisational unit in charge of risk management. Also, they are required to prescribe procedures for risk identification, measurement and assessment, as well as procedures for risk management. The risks to which a bank is particularly exposed in its operations are market risks (interest rate risk, foreign exchange risk, and risk from change in market price of securities, financial derivatives and commodities), credit risk, liquidity risk, exposure risks, investment risks, country risk, operational risk, legal risk, reputational risk, and strategic risk. These risks are highly interdependent. Events that affect one area of risk can have ramifications for a range of other risk categories. This is why banks are progressively becoming circumspect to improve their ability to identify measure, monitor and control the overall risk.

8.21.1 Credit Risk Management

Credit risk is most simply defined as the potential that a bank borrower or counterparty will fail to meet its obligations in accordance with agreed terms. The goal of credit risk management is to maximise a bank's risk-adjusted rate of return by maintaining credit risk exposure within acceptable parameters. Banks need to manage the credit risk inherent in the entire portfolio as well as the risk in individual credits or transactions. Banks should also consider the relationship between credit risk and other risks. The effective management

of credit risk is a critical component of a comprehensive approach to risk management and essential to the long-term success of any banking organisation. For most banks, loans are the largest and most obvious source of credit risk; however, other sources of credit risk exist throughout the activities of a bank, including in the banking book and in the trading book, and both on and off the balance sheet. Banks are increasingly facing credit risk (or counterparty risk) in various financial instruments other than loans, including acceptances, interbank transactions, trade financing, foreign exchange transactions, financial futures, swaps, bonds, equities, options, and in the extension of commitments and guarantees and the settlement of transactions.

BASEL II on Credit Risk

The Basel Committee on Banking Supervision released a consultative document on New Capital Adequacy Framework with a view to replacing 1988 Accord. The document proposes three pillars for the new accord—(1) minimum capital requirements, (2) supervisory review, and (3) market discipline. The new accord continues with the minimum capital adequacy ratio of 8 percent of risk-weighted assets. A range of options to estimate capital as proposed in the document include a standardised approach, foundation internal rating-based (IRB) supervision and an advanced IRB. Under the standardised approach, preferential risk weights in the range of 0, 20, 50, 100 and 150 percent are envisaged to be assigned on the basis of external credit assessments. Under foundation IRB, the committee proposes certain minimum compliance, *viz.*, a comprehensive credit rating system with capability to quantify probability of default (PD) while assigning preferential risks weights, with the information supplied by national supervisor on loss given default (LGD) and exposure at default (EAD). Under advanced IRB, individual entities are allowed to use their own estimates of PD, LGD and EAD which are required to be validated by the national supervisors. Adoption of new capital accord by banks in the proposed state requires complete change in the existing credit risk management systems. The in-built capital incentives proposed in the accord also foresees banks to go for upgrading the existing credit risk management systems for optimising capital. The calculation of expected loss is based on the current risk profile of the portfolio. Whenever possible, the calculation of expected loss ignores historical loss rates. Banks that rely on their average loss experience to derive expected loss are assuming that the risk profile, business mix and risk management processes remain constant over time. In most cases, the existing profile is considerably better than the one that created the losses of the past, and penalising current business owners for past events seems unnecessary. In addition, any absence of past losses would be driven mostly by external variables, such as government regulation or inflation, rather than by a true absence of risk. Losses in Asia, for example, were very low for many years.

Estimation of Credit Risk

Recent developments in the domain of risk management have given rise to a host of techniques/tools to quantify and predict credit risk through risk modelling. The credit risk models offer a framework for quantifying, analysing and predicting credit risks. A host of techniques have been used in recent times for estimation of credit risk. Following are some of the common methods increasingly being used by financial companies worldwide.

Econometric Techniques: Models in the forms of linear, multiple discriminant analysis, multiple regression and logistic analysis are commonly used in a functional form, wherein the probability of default as a dependent variable is explained by a set of independent variables.

Neural Network: The computer-based systems that use same data employed in the econometric techniques and arrive at a set of alternative decisions through trial and error methods.

Optimisation Models: The mathematical programming techniques that assign optimum weights for borrowers and loan attributes that minimise lender error and maximise profits.

Rule-based or Expert Systems: A set of decision rules, a knowledge base, consisting of data, such as, industry financial ratios and a structured inquiry process used by analysts in getting data on a particular borrower and assessing the risk.

Hybrid Systems: Direct computation, estimation and simulation are driven by a causal relationship while parameters are determined through estimation techniques.

The allocation of capital for credit risk is complicated by portfolio effects. Three of these warrant explicit consideration:

(i) The shape of the loss distribution—in allocating capital it is necessary to determine the number of standard deviations that equates to a level of confidence of 99.95 percent. This number depends on the shape of each portfolio distribution. Of course, each portfolio may have a very different distribution. A credit card portfolio, for example, may reach 99.95 percent at five standard deviations, whereas a corporate lending portfolio may require up to nine standard deviations;

(ii) Correlation between default risk and loss given default—during the early 1990s, default rates were significantly higher than they are now, whereas recovery rates were lower. The correlation between the two measures helps to explain the large losses incurred during the property downturn of that period; and

(iii) Impact of diversification between portfolios—this is one of the traditional dilemmas of capital allocation. To what degree should the effects of diversification between businesses be taken into account?

Credit Rating Framework

The internal Credit-risk Rating Framework (CRF) involves classification of individual loan on the basis of their credit risk exposures. Individual loan applications are generally classified as 'Good' or 'Bad' on the basis of a binary gradation, based upon a well-defined and consistent scaling technique. The CRF should be developed in such a way that it is comparable, amenable for aggregation/dis-aggregation and should comply with the regulatory stipulations on asset classification. There are nine steps identified by RBI in arriving at risk-ratings. These are as follows:

Step 1: Identifying all the principal business and financial risk elements

Step 2: Allocating weights to principal risk components

Step 3: Comparing with weights given in similar sectors and checking for consistency

Step 4: Establishing the key parameters (sub-components of the principal risk elements)

Step 5: Assigning weightages to each of the key parameters

Step 6: Ranking the key parameters on the specified scale

Step 7: Arriving at the credit-risk rating

Step 8: Comparing with previous risk-ratings of similar exposures and checking for consistency

Step 9: Concluding the credit-risk calibration

Essentials for an appropriate credit risk management mechanism could include the following:

1. Basic approach to credit risk management should begin with the establishment of an appropriate credit risk policy at the Board of Directors level.
2. Banks should identify and manage credit risk inherent in all products and activities.
3. Senior management should have responsibility for implementing the credit risk strategy approved by the Board of Directors and for developing policies and procedures for identifying, measuring, monitoring, and controlling credit risk.
4. Tools and techniques along with the required MIS should be designed and placed with the middle and senior management level.
5. For effective implementation of the policy, required competencies and clear accountabilities need to be put in place.

8.21.2 Market Risk Management

Banks are exposed to market risk via their trading activities and their balance sheets. Two types of risks are considered as the market risks for banks such as interest rate risk and foreign exchange risk. Banks face the foreign exchange risk due to the exchange rate fluctuations and interest risk is the most common risk all the banks manage because all the financial products issued by banks are interest rate sensitive. The next section has discussed about the interest rate risk extensively.

Interest Rate Risk

Interest rate risk is the risk of negative effects on the financial result and capital of the bank caused by changes in interest rates. Interest rate risk management forms one of the most critical components of market risk management in banks. As opposed to a completely regulated regime earlier, almost complete deregulation of interest rates has exposed banks to adverse impact of volatility in interest rates. Generally, the net interest margin (NIM) of banks is a direct function of interest rate movements. Consequently, movements in interest rate have a bearing on the earning ability of assets and the cost of liabilities. The overarching objective of interest rate risk management is to ensure a cash flow mechanism that is devoid of major mismatches in both assets and liabilities segments. As financial intermediaries, banks encounter interest rate risk in several ways as briefly discussed below:

(i) **Re-pricing Risk:** The primary form of interest rate risk arises from timing differences in the maturity (for fixed rate) and re-pricing (for floating rate) of assets, liabilities and off-balance-sheet (OBS) positions. While such re-pricing mismatches are fundamental to the business of banking, they can expose a banks' income and assets' underlying economic value to unanticipated fluctuations as interest rates variations tend to be too frequent and volatile.

(ii) **Yield Curve Risk:** Re-pricing mismatches can also expose a bank to changes in the slope and shape of the yield curve. Yield curve risk arises when unanticipated shifts of the yield curve have adverse effects on banks' income or economic value of their asset portfolio.

(iii) **Basis Risk:** The risk that the interest rate for different assets and liabilities may change in different magnitudes is called basis risk. Such risk arises due to imperfect correlation in the adjustment of the rates earned and paid on different instruments with otherwise similar re-pricing characteristics. When

interest rates change, these differences can give rise to unexpected changes in the cash flows and earnings spread between assets, liabilities and OBS instruments of similar maturities or re-pricing frequencies.

(iv) **Embedded Option Risk:** An additional and increasingly important source of interest rate risk arises from the options embedded in many bank assets, liabilities and OBS portfolios. Formally, an option provides the holder the right (but not the obligation) to buy, sell or in some manner alter the cash flow of an instrument or financial contract. Options may be stand-alone instruments such as exchange-traded options and over-the-counter (OTC) contracts, or they may be embedded within otherwise standard instruments. While banks use exchange-traded and OTC-options in both trading and non-trading accounts, instruments with embedded options are generally most important in non-trading activities. They include various types of bonds and notes with call or put provisions, loans which give borrowers the right to prepay balances, and various types of non-maturity deposit instruments, which give depositors the right to withdraw funds at any time, often without any penalties. If not adequately managed, the asymmetrical payoff characteristics of instruments with optional features can pose significant risk.

(v) **Re-investment Risk:** Uncertainty about future interest rate gives rise to re-investment risk as future cash flows will be re-invested at a rate unknown at present. Ordinary yield curve, without bootstrapping, does not take into account the re-investment risk.

Measurement of Interest Rate Risk

Effective management of interest rate risk (IRR) necessitates identification and quantification of risk. Various tools have evolved to measure interest rate risk and hedge them so as to reduce their adverse impact on bank balance sheet. Most widely used techniques for measurement of interest rate risk are (1) maturity gap analysis, (2) duration and modified duration, (3) simulation modelling, and (4) value-at-risk.

Maturity Gap Analysis (MGA): It is the simplest analytical technique for calculating IRR exposure. It distributes interest rate sensitive assets (RSA), liabilities (RSL) and off-balance sheet position into a certain number of pre-defined time bands according to their maturity (fixed rate) or time remaining for their next re-pricing (floating rate). A negative gap means that banks have more RSLs than RSAs. The gaps are multiplied by assumed interest rate changes to derive the earnings at risk (EaR). EaR broadly indicates the extent to which earnings can be impacted by interest rate changes.

Maturity gap measures the direction and extent of asset–liability mismatch. It is computed for assets and liabilities of differing maturities and is calculated for a set time horizon. This model looks at the repricing gap that exists between the interest earned on the bank's assets and the interest paid on its liabilities over a particular period of time. It highlights the net interest income exposure of the bank as a response to changes in interest rates in different maturity buckets. Re-pricing gaps are calculated for assets and liabilities of differing maturities. A positive gap indicates that assets get re-priced before liabilities, whereas a negative gap indicates that liabilities get re-priced before assets. The bank looks at the rate sensitivity of each asset and liability on the balance sheet. The general formula used is as follows:

$$\partial(\text{NII})_t = \partial\{R_t(\text{GAP})_t)\}$$

where, NII: Net Interest Income,

R: Interest rates impacting assets and liabilities in the relevant maturity bucket, and

GAP: Difference between the book value of the rate sensitive assets and the rate sensitive liabilities.

Thus, when there is a change in the interest rate, one can easily identify the impact of the change on the net interest income of the bank. For banks, it is essential to benchmark their earnings and fix threshold limits beyond which hedging strategies can be devised. The gap analysis indicates IRR exposure of banks over distinct maturities and provides a cue to necessary changes in the portfolio. Interest rate changes have a market value effect. The basic weakness with this model is that this method takes into account only the book value of assets and liabilities and, hence, ignores their market value. This method, therefore, is only a partial measure of the true interest rate exposure of a bank. Variability of interest rate primarily depends upon various phases of business cycle and, hence, for maximising NII, maturity gap model needs to be aligned with the different phases of business cycle.

Prosperity: During this phase, interest rate is generally at its peak. Therefore, banks should encourage fixed rate assets and floating rate liabilities. As interest rate is high, long-term fixed deposits should be avoided and assets and liabilities should be managed in such a way as to have a negative gap to take advantage of high interest rate environment.

Recession: During this phase, interest starts moving southward and, hence, banks should try to get fixed rate loans, accept floating rate deposits for short-term and discourage long-term fixed deposits. To maintain their NII, banks should try to have a negative gap.

Depression: This phase coincides with low level of economic activities and interest rate, generally, at its beneath. To protect their NII, banks should sell their fixed rate assets. During this phase, banks should accept long-term fixed deposits at fixed interest rate and try to create floating rate assets. A positive gap during this phase is advisable for banks.

Recovery: Economic activities commence during this phase of business cycle and so also the revival of the interest rate cycle. Banks should create more rate sensitive assets at floating rate of interest and deposits at fixed rate. A positive gap with more assets than liabilities could be advisable for banks during this phase.

However, MGA features some limitations as follows:

- It quantifies only the time difference between re-pricing dates of assets and liabilities. It fails to measure the impact of basis and embedded option risks.
- Gap report assumes that all assets and liabilities are matured or re-priced simultaneously.
- Gap also fails to capture variability in non-interest revenue and expenses, a potentially vital source of risk to current income.

Duration Gap Analysis (DGA): Compared to the simple MGA, DGA matches the duration of assets and liabilities, instead of matching the maturity or re-pricing dates, and as such, is a more effective way of cushioning economic value of assets against IRR. Duration is a measure of the percentage change in the economic value of a portfolio that will occur consequent to changes in interest rates. However, measurement of duration gap is much more complex compared to the simple gap method. Banks have the option of estimating the economic value changes consequent to changes in market interest rates by calculating the duration of each asset, liability and off-balance sheet exposure (OBS) position and weigh each of them to arrive at their weighted duration.

Difference between duration of assets (DA) and liabilities (DL) is the bank's net duration. If DA > DL, then a decline in market interest rates is likely to increase the market value of equity (MVE). When the duration gap is negative (DL > DA), MVE increases when the interest rate increases and it decreases in the face of

decline in interest rates. Using the duration model, it is possible to immunise the interest spreads of banks. If both assets and liabilities have same duration, they will immunise each other and, hence, protect the interest spreads. In other words, setting the net duration gap at zero, interest rate risk can be eliminated. However, for optimising interest spreads, it is essential to link the net duration gap with the movement of interest rate cycle.

Duration analysis facilitates a comprehensive measure of IRR for the total portfolio, well recognising the time value of money. Its additive characteristic also enables banks to match total assets and total liabilities rather than matching individual portfolios. Duration gap provides an index of the interest rate sensitivity of various segments of the entire portfolio and, hence, it is possible to estimate the aggregate duration gap of the bank. To protect the book value of the bank, the net duration gap (DGAP) should be fixed at zero. In other words,

$$DGAP = DA - \delta \times DL$$

where, DA denotes the weighted average duration of assets, DL denotes the weighted average duration of liabilities and θ denotes the ratio of liabilities to assets

However, duration has also its own limitation as it assumes that there is always parallel shift in yield curve, which may not be so during the time of high upheaval in financial market. After estimating duration for each bucket of assets and liabilities, it is necessary to estimate modified duration for 'stress testing and scenario analysis'. While duration is a static concept, modified duration is a dynamic one. Modified duration indicates the change in duration due to underlying change in interest rate. Modified duration along with the convexity enables banks to measure the effect of interest rate change on the portfolio loss/gain due to parallel shift in yield curve. Using the Talyore approximation series, with a small change in yield, the possible change in price can be estimated by following formula:

$$\frac{\partial p}{p} = (-D \times \partial y) + (1/2) \times C \times (\partial y^2)$$

$$D = \left(\frac{-1}{p}\right)\frac{\partial p}{\partial y}$$

$$C = -\frac{\partial D}{\partial y}$$

where, D is the modified duration and C is the convexity correction.

Using RBI guidelines for parallel shift in yield for different basis points for different zone, capital change for interest rate rise is estimated for investment portfolio. In case of deposits/liabilities after estimating bucket-wise duration, modified duration is calculated following recent RBI's guideline on ALM (2006). In case of commercial banks in India, 95 percent of liabilities are contributed by deposits. Hence, modified duration would be indicative in the sense that further rise in interest rate would affect cost of deposits. However, advances, which constitute a significant part of assets, are affected by change in yield. After estimating bucket-wise duration of advances, modified duration is measured by considering respective bucket-wise yield of FIMMDA yield curve.

Simulation Modelling: Many of the reputed and fundamentally advanced banks take recourse to balance sheet simulation modelling for gauging the impact of interest rate movements on their earnings, spanning over different time horizons. Such a method eliminates the limitations of maturity gap and duration gap

methods, by objectively and precisely mapping interest rate sensitivity. Being predominantly IT-enabled, simulation modelling provides cues regarding future course of interest rates, shape of yield curve, changes in business activity and pricing and hedging strategies over a wide spectrum. Simulation modelling, by virtue of providing multiple strategic options, also proves to be an important planning tool, under both static and dynamic environments. However, its effectiveness depends on structure of the model selected, validity of assumptions, requisite IT support and quality of expertise handling the IRR affairs. Simulation modelling can be carried out for estimating the impact of interest rate change on net interest income under different scenarios both through maturity gap model and value at risk model.

Value at Risk (VaR): The limitation of assumption of parallel shift in yield curve make duration/convexity/modified duration redundant in exact estimation of impact of interest rate risk. In this context, it is generally advised to use value-at-risk model for estimation of maximum loss for a given change in interest rate. However, the existing VaR model does not take into account the abnormal change/shift (beyond parallel shift) in yield curve and hence same model risk prevails with normal VaR model. In this connection, Dharba (2001) used extreme value method, which takes into account extreme events, which do not figure in normal parallel shift of yield curve, and estimate capital charge for market risk of investment portfolio of commercial banks in India.

Value-at-risk indicates the potential loss of a position/asset over a period of time with a given level of confidence. It is generally used for assets/segments of market/financial position, which are highly volatile in nature. VaR is mostly used for foreign exchange position, bond and equity market. It can be used for individual asset and also for the entire portfolio to arrive at the potential portfolio loss. The adoption of portfolio risk profiling through VaR encourages new methods of hedging risk at the aggregate level rather than at individual asset level. Basel Committee has recommended VaR for banks holding complex mixtures of trading, hedging and speculative assets. Similarly, JP Morgan's proprietary version (Riskmetrics) provides time series of volatilities and correlations for traded financial instruments.

Assuming that price changes of financial instruments are jointly normally distributed, serially independent and have constant volatility, VaR is defined as follows:

$$\text{VaR} = V_i \times \frac{\partial V}{\partial P} \times \partial P_t$$

where,

V_i denotes the market value of the position at time i,

DV/DP denotes the sensitivity of market value to changes in P (for example interest rates), and DP_t denotes the change in P, of the underlying asset, over time interval t.

VaR has the greatest potential applicability in the area of trading risk (both bond, equity and foreign exchange markets). VaR limits can be set for entire trading operation and for each type of risk. No doubt, Extreme Value Theory is more useful in estimating maximum loss. However, parallel shift in yield curve, generally causes maximum risk to interest rate change as abnormal shift in yield curve rarely occurs. BIS suggests the use of 1 year change in long-dated paper (10-year paper) and it should be simulated by 200 bps for estimating VaR.

Interest Rate Risk 'Stock Index Approach': It is generally found that interest rate fluctuations which affect banks' earnings are reflected in the stock price movement of the bank. Hence, stock price index also provides an avenue to estimate interest rate risk. In this paper, sensitivity of interest rate is observed against the return of bank index.

$$(R_S - R_L) = \beta + \lambda(R_M - R_L) + \varepsilon$$

where, R_L = Long-term risk-free interest rate (government bond 10-year maturity),

R_s = Return on bank index

R_M = Return on equity market

'λ' indicates the sensitivity of interest rate change on stock price of the banks.

8.21.3 Operational Risk

It is one of the new planks of the Basel-II capital accord. In rapidly changing financial markets, increasing complexity of financial instruments and transaction processes has thrown new challenges to banks and financial institutions in the form of increased susceptibility to operational risk. Operational risk is defined as 'the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events'. This definition includes legal risk, but excludes strategic and reputational risk. On the other hand, the Reserve Bank of India has defined operational risk, as 'any risk, which is not categorised as market or credit risk, or the risk of loss arising from various types of human or technical errors'.

Sources of Operational Risk

A few sources of operational risks include (i) wrong/delayed decisions and lack of accountability, control and proper auditing, (ii) inadequate MIS, (iii) incompetency of staff and lack of proper training and job rotation, (iv) lack of succession planning and development of second line, (v) lack of contingency planning, (vi) non-compliance with circulars, policies and regulatory requirements, (vii) obsolete policies, (viii) involvement of staff in frauds and forgeries, (ix) failure of electronic instruments, such as computer systems, software and telecommunication equipment, (x) legal flaw in execution of security documents for advances, (xi) natural calamities and unanticipated changes, and (xii) deterioration of bank image due to poor services, staff behaviour, frauds, high NPAs and so on.

Measurement of Operational Risk

Identification and measurement of operational risk has called for banks to re-orient their policy framework so as to manage these risks more effectively. At present, banks account for their losses due to operational risk by debiting it to their P&L account without allocating any capital charge for it, unlike in case of credit and market risk. Under Basel-II, operational risk needs to be assessed separately from credit and market risk followed by suitable capital charge for the same. Basel-II Committee has devised three approaches, namely, (1) Basic Indicator Approach, (2) Standardised Approach, and (3) Internal Management Approach. Under Basel-II framework of operational risk management, banks are encouraged to move along the spectrum of available approaches as they develop more sophisticated operational risk measurement systems and practices.

(1) The Basic Indicator Approach

Banks using the Basic Indicator Approach must hold capital for operational risk equal to the average over the previous 3 years of a fixed percentage (denoted alpha) of positive annual gross income. Figures for any year in which annual gross income is negative or zero should be excluded from both the numerator and denominator when calculating the average as follows:

$$K_{BIA} = [\sum(GI_{1\ldots n} \times \alpha]/n$$

where,

K_{BIA} = the capital charge under the Basic Indicator Approach

GI = annual gross income, where positive, over the previous 3 years

n = number of the previous 3 years for which gross income is positive

α = 15% which is set by the committee, relating the industry wide level of required capital to the industry wide level of the indicator.

(2) The Standardised Approach

In the Standardised Approach, banks' activities are divided into eight business lines: corporate finance, trading and sales, retail banking, commercial banking, payment and settlement, agency services, asset management and retail brokerage. Within each business line, gross income is a broad indicator that serves as a proxy for the scale of business operations and thus the likely scale of operational risk exposure within each of these business lines. The capital charge for each business line is calculated by multiplying gross income by a factor (denoted beta) assigned to that business line. Beta serves as a proxy for the industry-wide relationship between the operational risk loss experience for a given business line and the aggregate level of gross income for that business line. It should be noted that in the standardised approach, gross income is measured for each business line, not the whole institution, that is, in corporate finance, the indicator is the gross income generated in the corporate finance business line. The total capital charge is calculated as the 3-year average of the simple summation of the regulatory capital charges across each of the business lines in each year. In any given year, negative capital charges (resulting from negative gross income) in any business line may offset positive capital charges in other business lines without limit. However, where the aggregate capital charge across all business lines within a given year is negative, then the input to the numerator for that year will be zero.

8.21.4 Liquidity Risk Management

Liquidity risk is the potential inability to meet the bank's liabilities as they become due. It arises when the banks are unable to generate cash to meet funds withdrawals, commitment credit or increase in assets. It originates from the mismatches in the maturity pattern of assets and liabilities. Measuring and managing liquidity needs are vital for effective operation of commercial banks. By assuring a bank's ability to meet its liabilities as they become due, liquidity management can reduce the probability of an adverse situation developing. The cause and effect of liquidity risk are primarily linked to the nature of the assets and liabilities of the bank. The bank should continuously monitor its liquidity position in the long run and also on a day-to-day basis. There are two approaches that relate these two situational analysis such as (i) Fundamental Approach and (ii) Technical Approach.

Fundamental Approach: This approach is used in the long run. In this approach the banks try to manage the liquidity risk by controlling its asset–liability position. A prudent way of tackling this situation could be by adjusting the maturity of assets and liabilities or by diversifying and broadening the sources of funds. Two alternatives that are available to control the liquidity exposure under this approach are asset management and liability management. This implies that liquidity can be imparted into the system either by liability creation or by asset liquidation, whichever suits the situation.

Asset Management: Asset management aims to eliminate liquidity risk by holding near cash assets, that is, those assets which can be turned into cash whenever required. For instance, sale of securities from the investment portfolio can enhance liquidity.

Liability Management: Converse to the asset management strategy is liability management which focuses on the sources of funds. Here the bank does not maintain any surplus funds, but tries to achieve the required liquidity by borrowing funds when need arises.

Technical Approach: This approach focuses on the liquidity position of the bank in the short run. Liquidity in the short run is primarily linked to the cash flows arising due to the operational transactions. Thus, when technical approach is adopted to eliminate liquidity risk, it is the cash flows position that needs to be tackled. The bank should know its cash requirements and the cash inflows and adjust these two to ensure a safe level for its liquidity position. There are two approaches which are used to assess the liquidity position in the short run that are (i) Working Funds Approach, and (ii) Cash Flows Approach.

Working Funds Approach: Under this approach liquidity position is assessed based on the quantum of working funds available to the bank. The working funds comprise owned funds, deposits and float funds. Instead of a consolidated approach, the bank can have a segment-wise breakup of the working funds to arrive at the percentage of maintaining liquidity. The liquidity of owned funds component will be nil. The second component of working funds is deposits, the liquidity requirements of which depend on the maturity profile. All deposits based on their maturity fall under three categories: (i) volatile funds, (ii) vulnerable funds, and (iii) stable funds. Volatile funds include deposits which are sure to be withdrawn during the period for which the liquidity estimates to be made. These include short-term deposits such as the 30-day deposits, and so on, raised from the corporates or high net worth clients of the bank. The probability of these funds being withdrawn before or on their maturity is high. Due to the nature of volatile funds, they demand almost 100 percent liquidity maintenance since the demand for funds can arise at any time.

Deposits which are likely to be withdrawn during the planning tenure are categorised as vulnerable deposits. A good example of this type of deposits is the savings deposits. The liquidity requirements to meet the maturity of the vulnerable funds will be less than 100 percent and varies depending upon the risk-return policy of the bank. The residual of the deposit base after segregating them into the above two categories will fall under the stable funds category. These deposits have the least probability of being withdrawn during the planning period and hence the liquidity to be maintained to meet the maturing stable deposits will also be lower. Most of the term deposits by their nature fall under this category.

Float funds which are the third component of the working funds are much similar to the volatile funds. These funds are generally in transit and comprise DDs, banker's cheques and so on, which may be presented for payment at any time. However, this segment also has a minimum level over and above which the variability occurs. Hence 100 percent liquidity will have to be provided for the variable component. Based on the working funds consolidated or component wise, the bank will have to assess the cash balances or liquidity position in the following manner: Lay down the average cash and bank balances to be maintained as a percentage of total working funds. Lay down the range of variance which can be taken as the acceptance level. The limitations of working funds approach are as follows: It is subjective to classify deposits based on their withdrawal pattern. The focus is laid only on existing deposits and it ignores potential deposits.

Cash Flow Approach: This method of forecasting liquidity tries to eliminate the drawback faced in the working funds approach by forecasting the potential increase/decrease in deposits/credit accommodation.

Two important concepts are required to be explained before discussing about the cash flow approach. First, it is the decision regarding the planning horizon for the forecasting and second, the costs involved in forecasting. Following such decisions, assessment of liquidity requirements can be made. The steps involved in this process are as follows:

(i) Estimate anticipated changes in deposits. Estimate the cash inflows by way of loan recovery.

(ii) Estimate the cash outflows by way of deposit withdrawals and credit accommodations.

(iii) Forecast these for the end of each period.

(iv) Estimate the liquidity needs over the planning horizon.

Banks and regulators have devised a number of ways to quantify and manage the varied dimensions of funding liquidity risk. These include:

Reserve requirements: These can include minimum holdings of physical cash, deposits at the central bank and securities for use as collateral in central bank monetary operations.

Liquidity ratio: Measures of liquid asset holdings relative to total assets or short-term liabilities.

Degree of asset and liability cash flow mismatch: Projected payment inflows and outflows are placed into maturity brackets and limits are placed on the degree of mismatch. This can also be calculated by currency denomination and different parts of the bank's business.

Degrees of diversification of borrowing facilities and contingent loan commitments: These reduce a bank's dependence on borrowing from, or the potential requirement to lend to, any single counterparty. In addition, banks protect themselves against liquidity risk by taking following measures:

(i) Limiting the liquidity options that they implicitly write (e.g. deposit withdrawal maxima and notice periods on time deposits);

(ii) Acquiring contingent credit facilities from banks and other lenders;

(iii) Holding high-quality securities that can be borrowed against, or sold quickly; and gaining access to central bank liquidity facilities (given collateral of sufficient quality) either through standing monetary policy operations or emergency facilities.

SUMMARY

- The banking system in India consists of the RBI, commercial banks and co-operative banks. Commercial banks are of the following types: scheduled, nonscheduled, Indian, foreign, public sector, private sector, RRBs and LABNKs.
- Profitability, liquidity, safety and social welfare (justice) are the major principles which banks strive to incorporate in their working.
- Commercial banks are fractional reserves banks, and they, unlike other financial institutions, can create money in certain multiples of their deposits which is known as the money multiplier.
- The importance of different types of banks in terms of their business in a descending order is as follows: Indian scheduled banks, public sector banks, private sector banks, foreign banks, RRBs and non-scheduled banks.

- The Indian banking system is of the branch-banking type and it is characterised by excessive concentration of business in a small number of big public sector banks. The relatively small unit banks are perhaps more suitable for our environment and objectives.
- Commercial banks provide many services which include acceptance of deposits, lending activities, overdraft facility, credit card, online banking, mobile banking, investment services, and so on.
- Bank's *liabilities* constitute five major items. The share capital, the contribution of the shareholders, reserves and surplus, which the bank has accumulated over the years from its undistributed profits, deposits made by customers, borrowings from other banks and central bank and other liabilities and provisions.
- Banks accept various types of deposits: demand, saving, fixed (time or term) and call deposits. Individuals own more than three-fourth of these deposits.
- Quantitatively, investments and bank credit are banks' most important assets of the commercial banks.
- The banks predominantly follow the 'liquidation' approach or 'real bills' doctrine rather than the 'going concern' approach in their lending. That is, banks provide advances primarily on a secured basis; their unsecured loans are hardly one-fourth of the total loans.
- The major ratios used to measure profitability of the bank are return on assets (ROA), return on equity (ROE) and net interest margin (NIM). Other ratios are used for measuring asset quality (provision for loan loss ratio and loan ratio), liquidity ratios (temporary investments ratio and volatile liability dependency ratio) and interest rate sensitivity.
- As such, with effect from 31 March, 2004, a non-performing asset shall be a loan or an advance where the interest and/or instalment of principal remain overdue for a period of more than 90 days in respect of the loan.
- Banks classify their assets into the following broad groups, *viz.*, (i) standard assets, (ii) sub-standard assets, (iii) doubtful assets, and (iv) loss assets.
- The Basle Committee on Banking Supervision appointed by the Bank for International Settlement (BIS) established in 1988 a system in which minimum capital requirements were set for banking firms based on the risk of bank assets. It specified capital to risk (weighted) assets ratio (CRAR) of 8 percent as the capital adequacy norm.
- Due to the economic prosperity, technological development, demographic changes the importance of retail banking has grown manifolds.
- International lending, claims of domestic bank offices on foreign residents, claims of foreign bank offices on local residents, claims of domestic bank offices on domestic residents in foreign currency are the major activities involved in international banking.
- Other major issues related to commercial banks are system of cheque clearances, participation certificates, and inter-bank participations, Stockinvest Scheme, Consortium Approach or Multiple Banking Arrangements, Lead Bank Scheme, Service Area Approach and Action Plans, local area banks, and growth of microfinance through commercial banks.
- The commercial banks have grown in terms of size, amount of deposits and credits by manifolds since 1951.

- The contribution of public sector banks has been highest in terms of deposits and credits.
- The credit–deposit ratio has been highest in the metropolitan areas then the other rural and semi-urban areas.
- In terms of liabilities deposits have the largest share followed by borrowings in total liabilities of commercial banks in India.
- The percentage of term deposits to total deposits has increased continuously throughout the years.
- The maturity structure of bank deposits has undergone important changes during 1969–2014.
- Savings and term deposits, primarily asset balances, are held mostly by individuals, and current deposits, being transactions balances, are held mostly by corporations and other institutions.
- The major sources of borrowings of commercial banks are borrowings from abroad, borrowings from other institutions, borrowings from RBI and other banks.
- Among all types of assets the share of loans and advances has been the highest followed by investments.
- The share of term loans has increased from 13 percent in 1973 to 83.8 percent in 2014. Throughout the period, the industrial sector has the largest share in bank credit.
- The 'temporal gap' has become more complex, but, on the whole, it can be said that the mild 'temporal gap' still exists.
- The banks have moved towards the best international practices with regard to capital adequacy, supervisory standards, transparency and disclosure, risk management and settlement of dues.
- Basel-II has devised three approaches, namely, basic indicator approach, standardised approach, and internal management approach to measure the operational risk in the bank.
- Indian commercial banks have tried to implement the Basel norms during the recent period.
- Various methods like econometric technique, optimisation models and so on are developed to measure the credit risk in banks.
- Commercial banks encounter interest rate risk in several ways such as repricing risk, yield curve risk, basis risk, and so on.
- Most widely used techniques for measuring interest rate risk are maturity gap analysis, duration and modified duration, and value at risk.

KEY TERMS

Commercial Bank
Deposit
Credit
Money Multiplier
Credit Card
Automatic Teller Machine
Debit Card
Online Banking
Mobile Banking
Private Banking
Demand Deposit
Term Deposit
Current Deposit
Savings Deposit
Call Deposits
Overdraft
Liquidation Approach
Going Concern Approach
Margin
Return on Assets
Net Interest Margin
Loan Ratio
Temporary Investment Ratio
Volatility Dependence Ratio
Non-Performing Asset
Standard Asset
Sub-Standard Asset

Doubtful Asset
Loss Asset
Capital Adequacy Ratio
Country Risk
Transfer Risk
Credit Risk
Interest Rate Risk
Market Risk
Liquidity Risk
Operational Risk
Currency Risk
Participation Certificate
Lead Bank Scheme
Local Area Bank
Temporal Gap
Basel-I
Basel-II
Basel-III
Basic Indicator Approach
Standardised Approach
Duration Gap

QUESTIONS

1. What is the theoretical basis of banking operations in India?
2. 'Commercial banks are special among the intermediaries for the development of the economy'. Justify.
3. What are the major services provided by commercial banks?
4. Explain the mechanism of credit card operation and online banking process.
5. What is balance sheet? Explain the various items in the balance sheet of a commercial bank.
6. Highlight the various approaches to commercial bank lending. What are the major factors affecting the bank lending?
7. What are the major performance indicators of commercial banks and how these are measured?
8. Give a comparative analysis of the growth and structure of commercial banking before and after liberalisation period in India.
9. Analyse the trends in different assets and liabilities of the commercial banks in India during the period 1969–2014.
10. What is the difference between secured and unsecured loans? How is the concept of security used in bank lending in India?
11. Discuss about the commercial banks' capital market operation in India.
12. How commercial banks manage their risks?
13. Explain the various methods of measurement of interest rate risk.
14. Discuss the different methods of measurement of credit risk and market risk.
15. What is liquidity risk and how it is managed?
16. How the banks manage the liquidity risk?
17. Write the notes on Basel-III norms on credit risk, market risk, operational risk, and liquidity risk.
18. What are the differences between Basel-II and Basel-III norms on banking supervision?
19. Write short notes on following:
    (a) Non-performing asset
    (b) Capital adequacy ratio

(c) Retail banking
(d) Bank competition
(e) International banking
(f) Interbank participation
(g) Stockinvest scheme
(h) Multiple banking arrangement
(i) Lead Bank Scheme
(j) Service Area Approach
(k) Microfinance
(l) Regional and rural banks

Co-operative Banks

9 CHAPTER

Learning Objectives

- **LO 1** Know the evolution of co-operatives in India
- **LO 2** Identify the structure of co-operative banks in India
- **LO 3** List the features of co-operative banks
- **LO 4** Discuss various government initiatives undertaken to strengthen the development of co-operative banks
- **LO 5** Explain the growth of co-operative banking in India
- **LO 6** Review major weaknesses of co-operative banks in India

9.1 INTRODUCTION

Co-operative banks are an important constituents of the Indian financial system, judging by the role assigned to them, the expectations they are supposed to fulfil, their number, and the number of offices they operate. A co-operative bank is a financial entity which belongs to its members, who are at the same time the owners and the customers of their bank. Co-operative banks are often created by persons belonging to the same local or professional community or sharing a common interest. The co-operative movement originated in the West, but the importance that such banks have assumed in India is rarely paralleled anywhere else in the world. Their role in rural financing continues to be important even today, and their business in the urban areas also has increased in recent years mainly due to the sharp increase in the number of primary co-operative banks. Co-operative banks are a part of the vast and powerful superstructure of co-operative institutions which are engaged in the tasks of production, processing, marketing, distribution, servicing and banking in India. The beginning of co-operative banking in this country dates back to about 1904 when official efforts were initiated to create a new type of institution based on the principles of co-operative organisation and management, which were considered to be suitable for solving the problems peculiar to the Indian conditions.

In rural areas, as far as agricultural and related activities were concerned, the supply of credit, particularly institutional credit, was woefully inadequate, and unorganised money market agencies, such as money lenders, were providing credit often at exploitatively high rates of interest. The co-operative banks were conceived in order to substitute such agencies, provide adequate short-term and long-term institutional credit

at reasonable rates of interest, and to bring about integration of the unorganised and organised segments of the Indian money market. When the national economic planning began in India, co-operative banks were made an integral part of the institutional framework of community development and extension services, which was assigned the important role of delivering the fruits of economic planning at the grass root levels. In other words, they became a part of the arrangements for decentralised plan formulation and implementation for the purpose of rural development in general and agricultural development in particular. Today co-operative banks continue to be a part of a set of institutions which are engaged in financing rural and agricultural development. This set-up comprises the RBI, NABARD, commercial banks, regional rural banks and co-operative banks. This chapter is devoted to the discussion of this important type of financial institution in India.

9.2 EVOLUTION OF CO-OPERATIVES IN INDIA[1]

LO 1
Know the evolution of co-operatives in India

In the first phase (1900–1930), the co-operative movement originated due to the initiative of the colonial government in the early twentieth century. The idea of establishing co-operatives of the type that worked successfully in Germany was mooted in the late nineteenth century. These co-operatives were seen as a means to liberate the poor farmers from the clutches of usurious moneylenders. The Government passed the Co-operative Societies Act in 1904 followed by a more comprehensive Co-operative Societies Act later in 1912. In 1915, the Maclagan Committee advocated that 'there should be one co-operative for every village and every village should be covered by a co-operative'. The Royal Commission made the observation 'if cooperation fails, there will fail the best hope of rural India'.

In the second phase (1930–1950), by virtue of the provisions of the RBI Act, the Reserve Bank was given a mandate to closely associate with matters relating to rural credit and banking. RBI Act provided for both the establishment of an agricultural credit department in the bank and extension of refinance facilities to the co-operative credit system. RBI introduced credit facilities to provincial co-operative banks for seasonal agricultural operations and marketing of crops from 1942.

In the third phase (1950–1990), a major initiative for pursuit of the mandate given to the Reserve Bank was taken with sponsoring of All India Rural Credit Survey in 1951–1952. The study recommended an integrated approach to co-operative credit and emphasized the need for viable credit co-operative societies by expanding their area of operation, encouraging rural savings and diversifying business. The Committee also recommended government participation in the share capital of the co-operatives. The National Commission on Agriculture (1976) recommended setting up of Farmers Service Co-operative Societies with the active collaboration of the nationalized banks. The involvement of commercial banks was institutionalized through nationalization of major commercial banks in 1969, causing unprecedented penetration of commercial banks in the rural sector. The state has used co-operatives to channel its development schemes, particularly, subsidy-based programs for the poor. As these institutions have a wide reach in the rural areas and also deal with finances, the choice was natural.

By 1982, to consolidate the various arrangements made by the RBI to promote/supervise institutions and channel credit to rural areas, NABARD was established based on the recommendation of the CRAFICARD

[1]Taken from the speech delivered by Dr. Deepali Pant Joshi, Executive Director, Reserve Bank of India at the National Meet of CEOs of State Co-operative Banks held at Mumbai on 21 March, 2014.

(Sivaraman Committee, 1981). The Agriculture Credit Review Committee (Khusro Committee, 1989) stressed the importance of encouraging members' thrift and savings for the co-operatives. It also emphasized the need for better business planning at the local level and for strategies to enable co-operatives to be self-sustaining. To this end, the committee was in favour of serving non-members, if it made business sense. The 1990s witnessed more concerted attempts by both the government and non-official organisations and co-operators, to explore ways to revitalize the co-operatives.

In the fourth phase (1990s and onwards), there has been an increasing realization of the deleterious impact of intrusive state patronage, politicization, and the consequent impairment of the role of co-operatives in general, and of credit co-operatives in particular, leading to a quest for reviving and revitalizing the co-operative movement. Several Committees were set up to suggest co-operative sector reforms during this period.

9.3 STRUCTURE OF CO-OPERATIVE BANKS IN INDIA

LO 2

Identify the structure of co-operative banks in India

The structure of the co-operative banking sector in India is complex. Credit needs of diverse sections of the population, both in terms of location and tenor, are addressed by different segments of the co-operative banking sector. While the urban areas are served by the urban co-operative banks (UCBs) with a single tier structure, the rural areas are largely served by two distinct sets

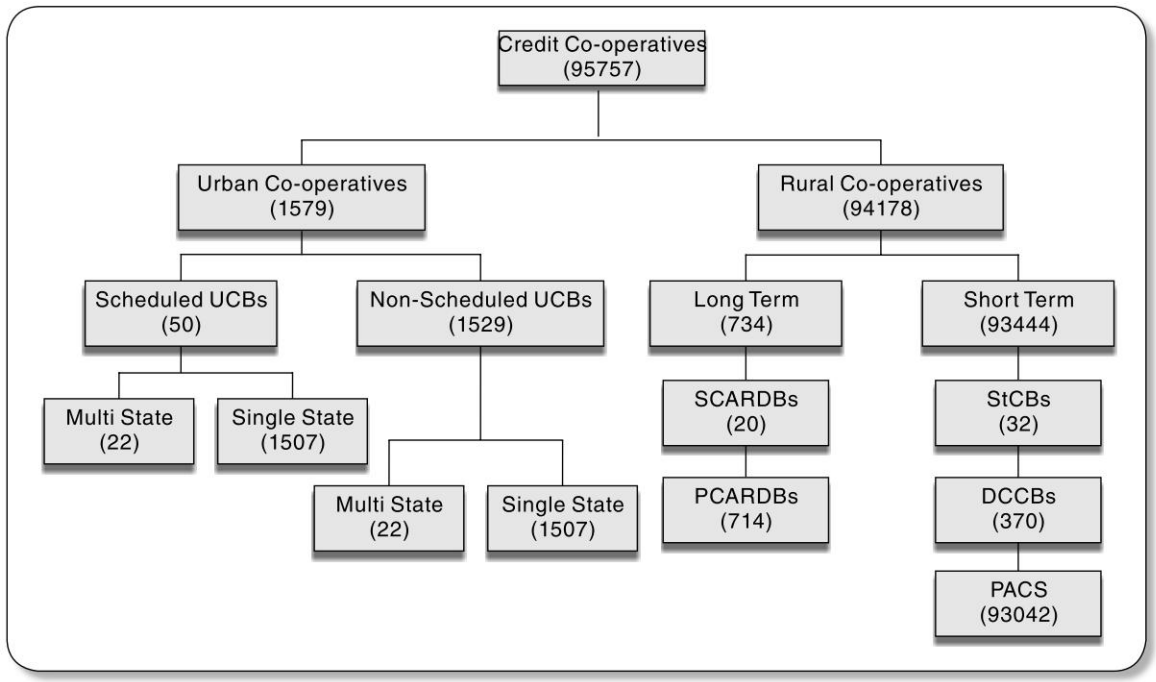

Figure 9.1 **Structure of co-operative banks in India.**

of institutions extending short-term and long-term credit. The short-term co-operative credit institutions have a three-tier structure comprising State Co-operative Banks (StCBs) at the apex level, District Central Co-operative Banks (DCCBs) [previously known as Central Co-operative Banks (CCBs)] at the intermediate level and Primary Agricultural Credit Societies (PACS) at the base level. The long-term co-operative credit institutions have, generally, a two-tier structure comprising the State Co-operative Agriculture and Rural Development Banks (SCARDBs) [previously known as State Land Development Banks (SLDBs)] at the state level and the Primary Co-operative Agriculture and Rural Development Banks (PCARDBs) [previously known as Primary Land Development Banks (PLDBs) at the district or block level. Long-term co-operative credit institutions have a unitary structure in some states with state level banks operating through their own branches, while in other states they have a mixed structure with the existence of both unitary and two-tier systems. The states which do not have long-term co-operative credit entities are served by state co-operative banks. Figure 9.1 shows the structure of co-operative banks in India.

9.4 FEATURES OF CO-OPERATIVE BANKS

LO 3
List the features of co-operative banks

(i) They are organised and managed on the principles of co-operation, self-help and mutual help. They function with the rule of 'one member, one vote'.

(ii) They function on 'no profit, no loss' basis. For commercial banks also, profitability is no longer the main objective, but in their case this change has been brought about as a result of social or public policy, while co-operative banks, by their very nature, do not pursue the goal of profit maximisation.

(iii) Co-operative banks perform all the main banking functions of deposit mobilisation, supply of credit and provision of remittance facilities. However, it is said that the range of services offered is narrower and the degree of product differentiation in each main type of service is much less in the case of co-operative banks, compared to commercial banks. In other words, co-operative banks are characterised by functional specialisation.[2]

(iv) As said earlier, co-operative banks do banking business mainly in the agricultural and rural sector. However, certain types of banks, *viz.*, UCBs, StCBs and DCCBs operate in semi-urban, urban and metropolitan areas also. The urban and non-agricultural business of these banks has grown over the years. The co-operative banks demonstrate a shift from rural to urban, while the commercial banks, from urban to rural.

(v) Co-operative banks are perhaps the first government-sponsored, government-supported, and government-subsidised financial agency in India. They get financial and other help from the RBI, NABARD, central government and state governments. They constitute the 'most favoured' banking sector with no risk of nationalisation. For commercial banks, the RBI is a lender of last resort, but for co-operative banks, it is the lender of first resort which provides financial resources in the form of contribution to the initial capital (through state governments), working capital and refinance. The promotional role of the RBI can be seen in respect of co-operative banks, and this role supersedes its regulatory role, in respect of these banks.

[2]See Government of India, Report of the Banking Commission, Delhi, 1972, p. 56.

(vi) A corollary of government help to co-operative banks is that there is much government intervention in their working. Co-operative banks are subject primarily to the control, audit, supervision and periodic inspection of the co-operative department of the state government under the Co-operative Societies Act, but less rigorously, by the RBI under the Banking Regulation Act. The RBI and the state government lay down rules for investment of surplus resources, reserves and the loan policy of co-operative banks. Consequently, compared to commercial banks, they have less freedom and flexibility in conducting their operations. Co-operative banks belong to the money market as well as to the capital market.

(vii) Co-operative banks are financial intermediaries only partially. The sources of their funds (resources) are (a) central and state governments, (b) the RBI and NABARD, (c) other co-operative institutions, (d) ownership funds, and (e) deposits or debenture issues. It is interesting to note that intra-sectoral flows of funds are much greater in co-operative banking than in commercial banking. Inter-bank deposits, borrowings and credit form a significant part of assets and liabilities of co-operative banks. This means that intra-sectoral competition is absent and intra-sectoral integration is high for co-operative banks. However, co-operative banks face stiff competition from commercial banks and other financial intermediaries. Till their nationalisation, commercial banks did not pose any competition to co-operative banks. In fact, till then, certain areas of operations were deliberately left to co-operative banks. But recently, the competition from LIC, UTI and small-savings organisation has become quite tough, and co-operative banks are in a disadvantageous position in this area of inter-sectoral competition.

(viii) The co-operative banks are subject to CRR and liquidity requirements as other scheduled and non-scheduled banks are. However, they are required to maintain the CRR and SLR only at the level of 4 percent and 22.5 percent, respectively, at present.

(ix) Co-operative banks shall pay interest on deposits of money (other than current account deposits) accepted by them or renewed by them in their Domestic, Ordinary Non-Resident (NRO), Non-Resident (External) Accounts (NRE) and Foreign Currency (Non-resident) Accounts (Banks) Scheme (FCNR(B)) deposit account.

(x) With effect from 25 October, 2011, saving bank deposit interest rate stands deregulated. Accordingly, banks are free to determine their savings bank deposit interest rate, subject to the following two conditions:

(a) First, each bank will have to offer a uniform interest rate on savings bank deposits up to ₹1 lakh, irrespective of the amount in the account within this limit.

(b) Second, for savings bank deposits over ₹1 lakh, a bank may provide differential rates of interest, if it so chooses, subject to the condition that banks will not discriminate in the matter of interest paid on such deposits, between one deposit and another of similar amount, accepted on the same date, at any of its offices.

(xi) Co-operative banks shall have the freedom to determine the maturity/tenor of the deposit subject to the condition that minimum tenor of the deposit offered shall be 7 days. Differential interest rate shall be offered only on bulk deposits.

(xii) Co-operative banks shall have the freedom to offer term deposits without premature withdrawal option, provided that all term deposits accepted from individuals (held singly or jointly) and Hindu undivided families for amount of ₹15 lakh and below shall have premature-withdrawal-facility.

(xiii) Lending rates of co-operative banks including UCBs for non-agricultural advances also became subject to the directives issued by the RBI with effect from 1981. As a result of measures adopted by the RBI in 1980 and 1981, a certain amount of uniformity has been brought about with regard to the lending rates charged by co-operative banks in different states, and between commercial and co-operative banks. The exposure to an individual borrower does not exceed 15 percent of capital funds, and the exposure to a group of borrowers does not exceed 40 percent of capital funds of UCBs.

(xiv) Although the main aim of the co-operative banks is to provide cheaper credit to their members, and not to maximise profits, they may access the money market to improve their income so that they remain viable. This is in keeping with the opening up of the non-farm sector to them in the recent past. Their need to access money market arises due to a variety of factors. First, co-operative banks are mainly in the field of financing seasonal agricultural operations, which creates cycles of flows of funds. Second, the short-term agricultural loans are given at a concessional rate of interest whereas interest rates paid on deposits by co-operative banks are higher than those paid by the commercial banks. It is true that they get concessional refinance from the NABARD, but its availability depends upon fulfilling conditions such as minimum involvement, non-overdue cover and so on. Similarly, many UCBs often have surplus funds which they mostly keep with the SCBs at a fixed rate of interest. There is, therefore, a need for co-operative banks to access money market to deploy their short-term funds profitably and cross-subsidise their lending operations.

(xv) Co-operative banks (COBs), in short, have played a pivotal role in the development of short-term and long-term rural credit structure in India over the years. The co-operative credit endeavour is said to be the first ever attempt at micro-credit dispensation in India.

9.5 GOVERNMENT INITIATIVES TO STRENGTHEN THE DEVELOPMENT OF CO-OPERATIVE BANKS

LO 4

Discuss various government initiatives undertaken to strengthen the development of co-operative banks

(i) The *Khusro Committee* has enunciated well the philosophy of future development of these banks. It rightly felt that co-operative banks must work as a total system and develop self-reliance. The higher tiers of the system must look upon the lower tiers as mother institutions from which they derive strength, and to which, they, in turn, provide authority, leadership, guidance, supervision and control. There should be mutual accountability, support and responsibility within the system so that it becomes cohesive and has an organic relationship between its different tiers. There should be a commonly shared interest in deposit mobilisation, profits and reserves. While self-reliance is a key to successful co-operatives, deposit-mobilisation is vital to self-reliance; and mobilisation of small savings, from as large a number of people as possible, is the desired strategy for deposit mobilisation. The committee has also recommended many major structural, operational and managerial changes to reform the system. One of them is to set up an apex institution called National Co-operative Bank of India (NCBI), in order to provide leadership at the national level backed by resources. At present, there are multiple apexes without any co-ordination and balancing of resources between them. The NCBI is expected to function essentially as a balancing centre. It will

retain the co-operative business which is currently going away to other banking sectors, and will be a receptacle and lender of funds for national federations and other co-operative structures. It will also be a receptacle of funds from international institutions. It will provide a national representative to the co-operative movement in decision making at banker's forums and regional and national decision-making authorities. The institution will not act as a channel of RBI/NABARD funds and will not add another tier to the refinancing chain. It will function as an ally to the NABARD.

(ii) The NABARD had formulated a scheme for the reorganisation of PACSs and the implementation of this scheme was started in those states which accepted it.

(iii) The programme for development of selected PACSs into truly multi-purpose co-operative societies has been implemented in many states and union territories.

(iv) The 15-point programme for the development of PACSs was implemented in 16 pilot project districts which is said to have brought about considerable improvement in the performance of selected PACSs in terms of deposits mobilised, loans issued and recovery of dues from the members.

(v) In addition to such programmes, certain state governments such as Andhra Pradesh, Madhya Pradesh and West Bengal had also initiated development programmes to strengthen the working of the co-operative credit institutions at the base level.

(vi) With a view to enable weak banks which were either ineligible or were on the verge of becoming ineligible for refinance support, a 12-point action programme had been formulated and circulated by NABARD to all the state governments.

(vii) Licensing of new UCBs has been liberalised greatly, and they have been brought under the stipulations in respect of income recognition, classification of assets, and other prudential norms.

(viii) The National Co-operative Bank of India (NCBI) was registered on 5 August, 1993 as a multi-state co-operative society. It is promoted by the National Co-operative Union as the apex institution for the co-operative banks. Its equity capital is ₹100 crore, and it has foreign equity participation also. The RBI and NABARD have not extended financial support to it; it is said that the RBI was not in favour of its being set up. The NCBI does not have any regulatory functions.

(ix) A co-operative development fund has been set up by NABARD to help improve managerial systems and skills in these banks.

(x) Lending and deposit rates of all co-operative banks have been more or less completely freed or deregulated.

(xi) PCBs have been allowed since April 1995 to invest their surplus funds in equity/bonds of all-India Financial Institutions, in addition to their investment in PSU bonds, within the ceiling of 10 percent of their deposits.

(xii) PCBs have been allowed since February 1996 to invest their surplus funds in CDs issued by scheduled commercial banks and other financial institutions approved by the RBI.

(xiii) All scheduled PCBs have been brought under the purview of the provisions of the Banking Ombudsman Scheme, 1995.

(xiv) Scheduled PCBs have been allowed since April 1996 to undertake equipment leasing and hire purchase financing activities after meeting certain prudential requirements.

(xv) PCBs have been allowed since November 1996 to invest their surplus funds in the units of UTI up to five percent of their incremental deposits of the previous year, subject to the overall ceiling of 10 percent of their deposits for investment in the bonds of public sector undertakings/companies and equity/bonds of all-India financial institutions.

(xvi) The PCBs have been now allowed to extend their area of operations to the entire district of their registration including rural areas, and they have been permitted, in view of the credit gap in agricultural sector, to extend direct finance for agricultural activities with effect from December 1996.

(xvii) The prudential accounting norms have been made applicable to SCBs/CCBs from the year 1996–1997 in two phases, *viz*., 1996–1997 and 1997–1998.

(xviii) In June 2004, it was decided not to issue fresh licenses for setting up new banks or for opening new branches, until a suitable framework for regulation and supervision was put in place for the existing UCBs.

(xix) In March 2005, the Reserve Bank prepared a draft vision document for UCBs which, *inter alia*, discussed the problems of the sector and highlighted the issue of dual regulatory mechanism which restricted the ability of the Reserve Bank in handling the weaknesses of entities in the sector.

(xx) In terms of the Vision document, the Reserve Bank approached the state governments for signing MoU to ensure greater convergence of approach of the two agencies entrusted with the regulation and supervision of UCBs. As part of the MoU, it was decided to set up state level task force for co-operative urban banks (TAFCUBs) comprising representatives of the Reserve Bank, state government and federation/association of UCBs. The TAFCUB was entrusted to identify the potentially viable and non-viable UCBs in the state and provide a revival path for the former and a non-disruptive exit route for the latter set of banks. The exit route could include merger/amalgamation with stronger banks, conversion into societies or ultimately as a last resort, through liquidation.

(xxi) The recommendations of the task force (Chairman: Prof. A. Vaidyanathan) appointed by the Government of India in 2004 to propose an action plan for reviving the short-term rural co-operative credit structure have been accepted in principle. The committee made the following recommendations in the draft Report:

(a) Financial assistance estimated at ₹4839 crore be provided to cover accumulated losses, cost of special audit and other technical assistance.

(b) The Government of India to bear all losses arising out of long-term loans for agriculture and related activities and the entire cost of special audit, technical assistance, including HRD efforts and implementation costs.

(c) The state governments to bear all dues payable by them to the long-term co-operative credit institutions and 50 percent of losses arising from non-agricultural loans and

(d) The LTCCI to bear 50 percent of losses arising from non-agricultural loans.

(e) PCARDBs be allowed to access all types of deposits from members, provide all types of loans to members and borrow from any regulated financial institution, including federal units of the STCCS.

(f) SCARDBs be allowed to mobilise public deposits on the lines of NBFCs under a suitable regulatory regime.

(g) Entire state equity in the LTCCI be retired.

(h) Branches of unitary structure be converted into autonomous PCARDBs.

(i) PCARDBs be allowed to federate themselves with an upper tier of their choice.

(j) SCARDBs should join hands with the StCB in its state and set up a support services unit on mutually acceptable terms to provide such services to lower tiers in both the structures.

(k) Capital to risk-weighted assets ratio (CRAR) of minimum 7 percent be stipulated and be increased to 12 percent in 5 years.

(xxii) The Government of India, in consultation with the state governments, has approved a revival package for the STCCS which was communicated to the state governments in January 2006. NABARD has been designated the implementing agency for implementing the revival package in all the states. The process of implementing the revival package in any state begins with the signing of the MoU among the GoI, the participating state government and NABARD. A special audit of all PACS, DCCBs and StCB in every participating state would be undertaken to arrive at a true and fair assessment of the amount of accumulated losses as on 31 March, 2004 as also a fair and acceptable proportion of such losses on the basis of the origin of such losses, that is, losses due to credit business, public distribution (PDS) business or other trading business. Every participating state would also promulgate an ordinance as per para 9 of the MoU to amend the State Co-operative Societies Act to give effect to the institutional and legal reforms envisaged in the revival package or would enact the necessary legislation. Implementation of the package has begun in thirteen states, *viz.*, Andhra Pradesh, Arunachal Pradesh, Bihar, Chhattisgarh, Gujarat, Haryana, Madhya Pradesh, Maharashtra, Orissa, Rajasthan, Uttarakhand, Uttar Pradesh and West Bengal, which have executed the MoUs with the Government of India and NABARD with conduct of special audits of PACS and HRD initiatives. These states have also initiated steps for bringing in necessary legal amendments to the respective Co-operative Societies Acts.

(xxiii) The Urban Co-operative banking sector has witnessed phenomenal growth during the last one and a half decade. Despite this, there were certain factors manifested in the sector that led to erosion of public confidence and also became a cause of concern for the regulators. One of the factors significantly affecting the financial health of the UCBs was their inability to attract equity/quasi equity investments. At present, UCBs have limited avenues for raising such funds and even their share capital can be withdrawn. In the Annual Policy Statement of 2006–2007 an announcement was made to constitute a working group to examine the issues of share capital of UCBs and identify alternate instruments/ avenues for augmenting the capital funds of UCBs. The working group was constituted under the Chairmanship of N.S. Vishwanathan and the major recommendations are as follows:

(a) The monetary ceiling prescribed in the Act on individual share holding comes in the way of the low capital or negative net worth UCBs when they are able to identify potential investors. In such cases, the state governments are requested to exempt the UCBs from the existing monetary ceiling on individual shareholding either through a notification or through amendment to the Act, where necessary.

(b) To provide instruments and avenues for raising stable and long-term funds having equity or quasi-equity characteristics.

(c) UCBs may be permitted to issue unsecured, subordinated, non-convertible, redeemable debentures/ bonds and the funds raised through such instruments may be treated as Tier II capital. These bonds could be transferable by endorsement and delivery.

(d) UCBs be allowed to issue special shares on specific terms and conditions. In consultation with the Reserve Bank and with the approval of the respective Registrar of Co-operative Societies (RCS), banks can also be allowed to issue these shares at a premium. The special shares will be non-voting, perpetual and transferable by endorsement and delivery. They would rank senior to only the ordinary shares and be treated as Tier I capital.

(e) The Reserve Bank may make an exception with regard to rating requirement to enable the commercial banks to invest in special shares and Tier II bonds issued by UCBs. UCBs may also be permitted to invest in Tier II bonds of other UCBs.

(f) UCBs be allowed to issue redeemable cumulative preference shares on specific terms and conditions with the prior permission of the respective RCS granted in consultation with the Reserve Bank.

(g) The Multi State Co-operative Societies Act should be amended in order to remove the limit prescribed on raising of funds by way of non-convertible bonds/debentures and UCBs be permitted to raise deposits of over 15 year maturity and such deposits can be considered as Tier II capital provided they met certain conditions.

(h) Where banks with negative net worth raise Tier II capital by way of bonds, preference shares and long maturity deposits through conversion of existing deposits, the Reserve Bank may, as an exception to the general rule treat these as part of regulatory capital even though Tier I capital is negative.

(i) As retained earnings are the only source of owned funds, the Reserve Bank could suggest to the Government of India to defer the application of income tax on UCBs for a period of 3 years by which time the alternate instruments may also take concrete shape.

(j) The working group recommended that the share capital of co-operatives be treated as equity and reckoned as Tier I capital for regulatory purposes.

(k) The working group has observed that a federated structure can be a lasting solution for the sector. But for this, it is required not only to amend the Co-operative Societies Act but also to make changes in the supervisory and regulatory practices. The working group has therefore recommended that the entire issues of creating an appropriate legislative and supervisory framework for the purpose is separately examined taking into consideration the international experiences and systems.

(xxiv) With a view to facilitate consolidation and emergence of strong entities and to provide an avenue for non-disruptive exit of weak/unviable entities in the co-operative banking sector, it has been decided to frame guidelines to encourage merger/amalgamation in the sector. The request for merger can emanate from banks registered under the same State Act or from banks registered under the Multi State Co-operative Societies Act (Central Act) for takeover of a bank registered under State Act. The procedure for merger either voluntary or otherwise is outlined in the respective state statutes/the Multi

State Co-operative Societies Act. The Registrars, being the authorities vested with the responsibility of administering the Acts, will be ensuring that the due process prescribed in the statutes has been complied with before they seek the approval of the RBI. They would also be ensuring compliance with the statutory procedures for notifying the amalgamation after obtaining the sanction of the RBI. An application for merger giving the proposed scheme will have to be submitted by the banks concerned to the Registrar of Co-operative Societies (RCS)/Central Registrar of Co-operative Societies (CRCS). The acquirer bank shall also forward a copy of the scheme to the Reserve Bank along with information. The Reserve Bank will be examining the same with reference to the financial aspects and the interests of depositors based on the criteria/factors and convey its decision to the concerned State RCS and in case the acquirer is a Multi-state Bank, to the CRCS and the RCS of the state in which the acquired bank is situated. Reserve Bank of India may consider proposals for merger and amalgamation in the following circumstances:

(a) When the net worth of the acquired bank is positive and the acquirer bank assures to protect entire deposits of all the depositors of the acquired bank.

(b) When the net worth of acquired bank is negative and the acquirer bank on its own assures to protect deposits of all the depositors of the acquired bank.

(c) When the net worth of the acquired bank is negative and the acquirer bank assures to protect the deposits of all the depositors of the acquired bank with financial support from the state government extended upfront as part of the process of merger.

In all cases of merger/amalgamation, the financial parameters of the acquirer bank post-merger should conform to the prescribed minimum prudential and regulatory requirement for urban co-operative banks. The realizable value of assets has to be assessed through a process of due diligence.[3]

(xxv) The Committee on Financial Sector Assessment set up by the Government of India in September 2006, under the Chairmanship of Dr. Rakesh Mohan, looked into the financial health of all the banks including the co-operative banks and made recommendations for improvement of financial health and systems for attaining and maintaining financial stability. A major recommendation of the Committee was to prohibit unlicensed banks from functioning beyond March 2012.

(xxvi) As there were a large number of co-operative banks (17 out of 31 state co-operative banks and 296 out of 371 district central co-operative banks) functioning without license, the Reserve Bank of India relaxed the licensing norms to grant license to these banks. The relaxed norms were (i) capital to risk-weighted assets ratio (CRAR)—minimum 4%, and (ii) compliance with CRR and SLR for the last 1 year (default on one or two occasions were permitted). Consequent upon relaxation of licensing norms, 50 banks qualified for issue of license reducing the number of unlicensed banks from 73 as on 29 February, 2012 to 43 as on 31 March, 2012 and further to 23 as on 30 June, 2013.

(xxvii) Since IT infrastructure is the prerequisite for offering these services, Core Banking Solution (CBS) is being implemented in StCBs and CCBs. Several banks have joined the NABARD-assisted project and made significant progress in implementation of CBS. Some banks have undertaken implementation of CBS on their own.

[3]https://rbi.org.in/Scripts/NotificationUser.aspx?Id=2631&Mode=0Guidelines for merger/amalgamation of Urban Co-operative Banks (UCBs)

(xxviii) Rural co-operative banks have been kept out of capital to risk-weighted assets ratio (CRAR) framework for a long time on the grounds that there is an in-built accretion to capital every time a loan is availed of by a member. In view of the high level of default characterizing the STCCS and the risk posed by higher concentration of loan portfolios of these banks in a single sector with defined areas of operation, the Vaidyanathan Task Force recommended for bringing all tiers of the STCCS under the CRAR framework. The Reserve Bank of India recently reviewed the position of CRAR in StCBs and CCBs and has introduced the minimum CRAR requirement for these banks. A roadmap has been laid down for achieving CRAR 9 percent by 31 March, 2017.

(xxix) Since these banks have limited avenues of mobilizing additional capital resources, permission has been granted for issue of long-term (subordinated) deposits and innovative perpetual debt instruments. State/Central co-operative banks (StCBs/CCBs) are now allowed to issue long-term (subordinated) deposits (LTD) with the prior permission of the respective registrar (RCS) granted in consultation with the Reserve Bank. LTD can be issued to members and non-members, including those outside the area of operations of the StCBs/CCBs concerned. There is no prohibition on existing shareholders subscribing to LTD. The amounts raised through LTD will be eligible to be treated as lower Tier II capital, subject to certain conditions.

(xxx) State/Central co-operative banks are also allowed to issue innovative perpetual debt instruments (innovative instruments). The instruments may be issued as bonds or debentures to qualify for inclusion as Tier I capital for capital adequacy purposes. Banks are required to obtain prior approval of the Reserve Bank of India, on a case-by-case basis, for issue of innovative instruments. Innovative instruments shall not exceed 15 percent of total Tier I capital. Innovative instruments in excess of the above limits shall be eligible for inclusion under Tier II, subject to limits prescribed for Tier II capital. However, investors' rights and obligations would remain unchanged.

(xxxi) Under the Credit Information Companies (Regulation) Act, 2005, all co-operative banks are credit institutions and every credit institution has to be a member of at least one Credit Information Company (CIC). State and central co-operative banks are required to take membership of at least one CIC. In developing economies, lending, especially to retail, has been made possible by credit information companies, which perform the vital task of collating and distributing reliable credit information to the specified users. Reports from CICs contain information about the payment behaviour of consumers and commercial entities, including data on timely fulfilment of or delinquency in meeting the financial obligations. It helps credit institutions in making an informed decision about a credit applicant.[4]

(xxxii) An expert committee was set-up under the chairmanship of Shri Y. H. Malegam in 2010 for studying the advisability of granting licenses to new co-operative banks. The committee recommended that new licenses may be given to UCBs having a good track record in relatively unbanked areas. It also recommended grant of licence to existing co-operative credit societies with proven track record.

(xxxiii) Introduction of liquidity adjustment facility for scheduled UCBs, permission to offer Internet (view only) facility to all the UCBs, enhancement of limit under the scheme of bullet payment of gold loans from ₹1.00 to ₹2.00 lakh, permission to offer Demat account trading facility and liberalization of opening of off-site ATM are some of the steps taken by RBI to strengthen the sector.

[4]The points XXIII to XXIX are taken from the speech delivered by Dr. Deepali Pant Joshi, Executive Director, Reserve Bank of India at the National Meet of CEOs of State Cooperative Banks held at Mumbai on 21 March, 2014.

(xxxiv) UCBs are now allowed to undertake Point of Presence (PoP) services under Pension Fund Regulatory and Development Authority (PFRDA), act as PAN service agent (PSA) for providing PAN issuance services to its customers and issue 'semi-closed pre-paid payment instruments' permitting payment of utility bill/essential services up to a limit of 10,000.

(xxxv) It was decided to make it mandatory to conduct the statutory audit of UCBs with a deposit base of above 250 million by statutory auditors (SAs) who will be qualified chartered accountants. Institute of Chartered Accountants of India (ICAI) is also being advised to prescribe a standard format for statutory audit report of the UCBs.

(xxxvi) RBI moved to CAMELS pattern of rating of UCBs w.e.f. 31 March, 2011 in lieu of earlier system of grading.

(xxxvii) Pursuant to the amendment to the Banking Regulation Act through the Banking Laws (Amendment) Act, 2012, the percentage of CRR to be maintained by non-scheduled co-operative banks and the percentage of SLR to be maintained by co-operative banks were brought in line with that of commercial banks with effect from the fortnight beginning 12 July, 2014. The assets eligible for being reckoned as part of SLR were also brought on par. To ensure that this is achieved in a non-disruptive manner, banks were allowed to reach the target in a phased manner.

(xxxviii) A new supervisory action framework (SAF) was prescribed by RBI in March 2012 which replaced the graded supervisory action. As a part of the SAF, RBI specified regulatory trigger points in terms of five financial parameters, *viz*., CRAR, gross NPAs, concentration of deposits, profitability and CD ratio for initiating structured and discretionary action in respect of banks hitting such trigger points. A revised SAF has been implemented based on the findings of inspection conducted with reference to 31 March, 2014. Under the revised framework, the individual UCB will be advised of the specific corrective action they need to take to improve the financial position.[5]

9.6 GROWTH OF CO-OPERATIVE BANKING IN INDIA

LO 5

Explain the growth of co-operative banking in India

The co-operative banks now operating in India outnumber the commercial banks. The number of co-operative banks increased until 2005–2006, after that there has been a slight decline for some types of banks. It could be due to the major initiatives taken by the commercial banks to open their branches in the rural sector. Deposits, credit and other indicators of all types of co-operative banks and the co-operative banking sector as a whole have also grown manifold over the period, 1986 to 2014. Their growth has not been uniform over the span of 30 years. On the whole, the annual rate of growth of all co-operative banks (in terms of deposits) has varied between 9 and 40 percent across different types of co-operative banks. If we rank different types of co-operative banks, it would be found that in terms of deposits, UCBs were the most important, followed by DCCBs, SCBs and PACSs, in the descending order, in 2012–2013. However, in terms of outstanding credit, the descending order in that year was UCBs, DCCBs, PACSs, and SCBs (Table 9.1).

[5]The points XXIII to XXIX are taken from the Speech delivered by Shri R. Gandhi, Deputy Governor at Maharashtra Urban Co-operative Banks' Conference 2015 at Nagpur on 24 October, 2015.

Table 9.1 Growth of co-operative banking in India

Variable & Year	*SCBs*	*CCBs/DCCBs*	*PACs*	*SLDBs/ SCARDBs*	*PLDBs/ PCARDBs*	*UCBs*
Number of Banks						
1985–1986	29	352	95000	19	NA	1306
1994–1995	28	361	90000	20	731	1431
2001–2002	30	368	NA	20	768	1854
2005–2006	31	366	NA	20	696	1853
2007–2008	31	371	97224	20	697	1770
2011–2012	31	370	93413	20	697	1618
2012–2013	31	370	92432	20	697	1606
2013–2014	31	370	NA	20	NA	1589
Owned Funds (₹ Crore)						
1985–1986	616	1007	1128	473	NA	612
1994–1995	1635	2783	2584	938	372	3312
2001–2002	6323	14148	NA	2753	2502	13797
2005–2006	10545	23450	NA	3352	3380	13973
2007–2008	10549	26180	11038	2931	3596	19499
2011–2012	11200	24200	14500	4500	4900	34300
2012–2013	14500	35900	16000	6400	4800	38000
2013–2014	NA	NA	NA	NA	NA	NA
Total Deposits (₹ Crore)						
1985–1986	21	38	4	NA	NA	NA
1994–1995	11547	18616	2520	112	NA	20101
2001–2002	35500	68090	NA	587	354	93069
2005–2006	45405	87532	NA	636	382	114060
2007–2008	56325	109597	25449	605	341	138496
2011–2012	86700	176800	50300	1100	500	238500
2012–2013	NA	NA	NA	NA	NA	276900
2013–2014	104730	236890	81900	1540	740	NA
Total Borrowings (₹ Crore)						
1985–1986	923	2351	3927	NA	NA	214
1994–1995	5150	7921	6596	6087	2816	577
2001–2002	11550	18818	NA	14875	10292	NA
2005–2006	16989	24217		17075	13066	1781
2007–2008	22164	21096	47849	16662	12751	2292
2011–2012	42700	50500	88800	16000	13500	3600
2012–2013	NA	NA	NA	NA	NA	3100
2013–2014	61000	72690	95840	15750	14440	NA

(*Contd.*)

Loans Outstanding (₹ Crore)						
1985–1986	3852	5444	4321	2652	NA	3046
1994–1995	10492	18240	11404	5646	1699	14795
2001–2002	32111	59269	NA	14172	10010	62060
2005–2006	39684	79202	NA	17712	12740	71641
2007–2008	57445	93162	57643	2226	1822	90444
2011–2012	75600	144800	107300	4159	3341	157800
2012–2013	NA	NA	161900	3652	3718	181000
2013–2014	103120	203003	171420	4924	4372	NA

Notes: SCBs, State Co-operative Banks; CCBs, Central Co-operative Banks; DCCBs, District Central Co-operative Banks; PACS, Primary Agricultural Credit Societies; SCARDBs, State Co-operative Agriculture and Rural Development Banks; SLDBs, State Land Development Banks; PCARDBs, Primary Co-operative Agriculture and Rural Development Banks; PLDBs, Primary Land Development Banks; UCBs, Urban Co-operative Banks.

Source: RBI, RTPBI, Various Issues.

Table 9.2 presents (a) borrowings to deposits ratio, and (b) credit (loans outstanding) to deposits ratio for different types of co-operative banks during 1985–1986 to 2013–2014. The borrowings to deposits ratio of PACs is very high; it varied from 170–600 percent for PACSs and 32–70 percent for SCBs and 19–48 percent for DCCBs, compared to 1–57 percent for UCBs. For SCARDBs and PCARDBs, it is also very high. The credit–deposit ratio usually exceeds one in the case of all types of co-operative banks, but it is particularly high in the case of PACSs, varying between 209 and 755 percent in the period under study. It varied from 87–114 percent for SCBs, 82–110 percent for DCCBs, 378–5041 percent for SCARDBs, and 62–668 percent for PCARDBs. For the UCBs, it has been around 65 percent in the year 2013–14. These levels are much higher than those for the commercial banks. The fact that co-operative banks provide credit to agriculture and other priority sectors in the rural and semi-urban areas, that they are not required to invest much in the government and semi-government securities and that there are no quantitative ceilings on their credit–deposit ratio should explain this phenomenon.

Table 9.2 Ratio analysis of operations of co-operative banks, 1985–86 to 2013–14

(*Percentage*)

Variable & Year	*SCBs*	*CCBs/DCCBs*	*PACs*	*SLDBs/ SCARDBs*	*PLDBs/ PCARDBs*	*UCBs*
Borrowings to Deposits						
1985–1986	72.27	47.67	686.53	NA	5.43	57.80
1994–1995	44.60	42.55	380.79	5434.82	2.87	60.77
2002–2003	32.26	24.88	NA	2011.76	1.56	NA
2005–2006	37.41	27.66	NA	2684.74	1.56	29.48
2007–2008	39.35	19.25	188.02	2754.05	3739.30	1.65
2011–2012	49.25	28.56	176.54	1454.55	2700.00	1.51
2012–2013	NA	NA	NA	NA	NA	1.12
2013–2014	58.25	30.69	117.02	1022.73	1951.35	NA

(*Contd.*)

Loans Outstanding to Deposits						
1985–1986	113.79	110.38	755.42	NA	77.32	150.57
1994–1995	90.86	97.98	452.54	5041.07	73.60	117.73
2002–2003	93.12	81.30	NA	2013	63.89	NA
2005–2006	87.40	90.48		2785.06	62.81	89.09
2007–2008	101.99	85.00	226.50	367.93	534.31	65.30
2011–2012	87.20	81.90	213.32	378.09	668.20	66.16
2012–2013	NA	NA	NA	NA	NA	65.37
2013–2014	98.46	85.70	209.30	319.74	590.81	NA

Notes and Source: Same as Table 9.1.

Table 9.3 State-wise distribution of UCBs in India (as on 31 March, 2003 and 31 March, 2007

State	*As on 31 March, 2007*		*As on 31 March, 2013*	
	No. of Banks	*%*	*No. Of Banks*	*%*
Andhra Pradesh	116	6.39	103	6.41
Assam	9	0.50	8	0.50
Bihar	3	0.16	3	0.19
Chhatisgarh	14	0.77	12	0.75
Delhi	15	0.82	15	0.93
Goa	6	0.33	6	0.37
Gujarat	284	15.66	234	14.57
Haryana	7	0.38	7	0.44
Himachal Pradesh	5	0.27	5	0.31
Jammu and Kashmir	4	0.22	4	0.25
Jharkhand	2	0.11	2	0.12
Karnataka	288	15.88	266	16.56
Kerala	60	3.30	60	3.74
Madhya Pradesh	60	3.30	51	3.18
Maharashtra	616	33.97	517	32.19
Manipur	3	0.16	3	0.19
Meghalaya	3	0.16	3	0.19
Mizoram	1	0.05	1	0.06
Orissa	14	0.77	11	0.68
Pondicherry	1	0.05	1	0.06
Punjab	4	0.22	4	0.25
Rajasthan	39	2.15	39	2.43
Tamil Nadu	130	7.17	129	8.03
Tripura	1	0.05	1	0.06

(*Contd.*)

Uttar Pradesh	70	3.86	69	4.30
Uttaranchal	7	0.38	5	0.31
West Bengal	50	2.75	46	2.86
Sikkim	1	0.05	1	0.06
Total	**1813**	**100**	**1606**	**100**

Source: RBI, RTPBI, 2006-07 and 2013-14.

The state wise distribution of UCBs is highly skewed as they are concentrated mainly in five states/union territories. As at end-March 2013, nearly 80 percent of total UCBs with around 85 percent of total branches operated in five states, *viz*., Andhra Pradesh, Gujarat, Karnataka, Maharashtra (including Goa) and Tamil Nadu (including Puducherry). Maharashtra (including Goa) alone accounted for around 53 percent of total branches of UCBs (Table 9.3).

Table 9.4 Performance of different types of co-operative banks in India

(percentage to total assets)

Variable and Year	*SCBs*	*CCBs/ DCCBs*	*SLDBs/ SCARDBs*	*PLDBs/ PCARDBs*	*UCBs*
Interest Income					
2001–2002	9.62	10.14	NA	NA	9.40
2005-–2006	6.95	7.46	NA	NA	4.53
2010–2011	6.37	6.92	7.01	6.35	7.66
2011–2012	6.56	8.39	6.80	6.11	8.60
Other Income					
2001–2002	0.52	0.60	NA	NA	1.31
2005–2006	0.43	0.69	NA	NA	0.68
2010–2011	0.30	0.47	0.46	2.38	0.58
2011–2012	0.34	0.50	0.48	2.29	0.65
Interest Expenditure					
2001–2002	7.33	7.14	NA	NA	7.19
2005–2006	4.78	4.59	NA	NA	2.92
2010–2011	5.22	4.36	4.56	5.16	4.80
2011–2012	5.34	5.28	4.76	4.96	5.47
Non-Interest Expenditure					
2001–2002	NA	NA	NA	NA	4.40
2005–2006	NA	NA	NA	NA	1.31
2010–2011	NA	NA	NA	NA	1.99
2011–2012	NA	NA	NA	NA	2.11
Operating Expenses					
2001–2002	0.73	1.70	NA	NA	NA
2005–2006	0.75	1.63	NA	NA	NA

(*Contd.*)

2010–2011	0.84	1.81	1.05	1.98	NA
2011–2012	0.88	2.17	1.36	1.91	NA
Net Profit					
2001–2002	0.31	-0.03	NA	NA	-0.88
2005–2006	0.49	0.14	NA	NA	0.59
2010–2011	0.35	0.39	0.00	-0.79	0.80
2011–2012	0.34	0.54	-0.07	-0.76	0.92

Notes and Source: Same as Table 9.1.

Table 9.4 tells us about the efficiency, financial/commercial performance of all types of co-operative banks in India. On the income side, although the interest income has increased in absolute term, the ratio of interest income to total assets has declined during 2001–2002 to 2010–2011, and it has increased during the year 2011–2012 for all types of co-operative banks. The other income has also shown the same trend like interest income. On the expenditure side, the interest expenses and other expenses have also declined during the said period. The scheduled UCBs had negative net profit in 2001–02; further the net profit has improved for these banks. DCCBs have also negative profit in the year 2001–02 and it has slightly improved in the later years. The SCBs have also very low profit during these years. The total expenditure and expenditure on interest payments have declined during this period. Interest income contributed almost 94 percent of the total income of SCBs as they had very limited sources of non-interest income. On the other hand, their operating expenses continued to rise. Both income and expenditure of COBs declined during 2001–2002 to 2010–2011. However, decline in income was sharper than the decline in expenditure, resulting in a sharp decline in operating and net profits. Interest income accounted for nearly 90 percent of the total income, while interest expenditure accounted for nearly two-thirds of total expenditure. As observed for SCBs, the non-interest income of CCBs also declined. Provisions and contingencies made by CCBs, however, increased. A comparison of indicators of financial performance of commercial banks (see Chapter 8) and co-operative banks would reveal that their respective levels of performance is quite similar at present; it cannot be said that either of them has significantly or noticeably done better or worse than the other.

Table 9.5 Non-performing assets of co-operative banks in India

(*Percentage*)

Year	*SCBs*	*CCBs/ DCCBs*	*PACs*	*SLDBs/ SCARDBs*	*PLDBs/ PCARDBs*	*UCBs*
1997–1998	12.5	17.8	35.3	18.6	16.5	11.7
2001–2002	13.4	17.9	32.4	18.5	30.2	21.9
2005–2006	16.8	19.7	30.4	32.7	35.6	18.9
2007–2008	12.8	20.5	35.7	34.5	53.7	15.5
2008–2009	12.0	18.0	44.8	30.1	39.0	13.0
2009–2010	8.8	13.0	41.4	45.1	51.9	10.1
2010–2011	8.5	11.2	25.2	32.3	40.6	8.4
2011–2012	7.0	10.2	26.8	33.1	36.7	7.0
2012–2013	6.1	9.7	NA	36.0	37.7	6.0
2013–2014	5.5	10.3	NA	31.6	38.0	5.7
2014–2015	4.9	9.5	NA	NA	NA	6.0

Notes and Source: Same as Table 9.1.

The ratio of gross NPAs to gross advances of COBs has varied between 5.5 and 51.9 percent across their different types during 1998–2015 (Table 9.5). For SCBs, it has declined from 16.8 percent in the year 2005–2006 to 4.9 percent in 2014–2015. For, DCCBs it has been varied between 9.5 and 20.5 percent. For PACs, SCARDBs and PCARDBs it is very high. The performance of SCBs has been better than that of both DCCBs and UCBs in terms of the extent of NPAs. The NPAs ratio for UCBs has increased from 11.7 percent in 1998 to 22 percent in 2002. Further it has declined to 5.7 percent in the year 2013–2014. Some notable features of the performance of COBs may be broadly summarised here as follows: (a) The net profit ratio has been very low or negative in the case of UCBs and CCBs. (b) The NPAs ratio for both of these types of banks has been quite high and it has tended to increase over the years, which is in contrast with the level and changes in the NPAs ratio for different types of commercial banks. (c) The performance of COBs has been similar with that of commercial banks in terms of the spread and most of the other financial indicators. (d) However, the NPAs of COBs have been higher than those of commercial banks, and while the former have increased, the latter have declined over the years.

9.7 MAIN WEAKNESSES OF CO-OPERATIVE BANKS IN INDIA

LO 6

Review major weaknesses of co-operative banks in India

The main weaknesses of co-operative banks are as follows:

(a) The vital link in the co-operative credit system, namely, the PACSs, themselves remain very weak. They are too small in size to be economical and viable; besides too many of them are dormant, existing only on paper.

(b) With the expanding credit needs of the rural sector, the commercial banks have come in actively to meet the credit requirements of this sector, and this has aggravated the difficulties of co-operative banks. The theory that co-operative banks would be buoyed up by the competition from other financial institutions does not appear to have worked.

(c) Co-operative banks are not doing well in all the states; only a few account for a major part of their business.

(d) These banks still rely very heavily on refinancing facilities from the government, the RBI and NABARD. They have yet not been able to become self-reliant in respect of resources through deposit mobilisation.

(e) They suffer from dangerously low or weak quality of loan assets and from highly unsatisfactory recovery of loans.

(f) They suffer from infrastructural weaknesses and structural flaws. They do not look like banks and do not inspire confidence in the potential members, depositors and borrowers.

(g) They suffer from too much officialisation and politicisation. Undue governmental interventions have prevented them from developing steadily as a self-reliant and resilient credit system. Most of them are headed by politicians.

(h) They unduly depend on government capital rather than member capital.

(i) There is no active participation of their members in their working, which can come about if they work with members' money rather than government largesse.

(j) They have been resorting to unethical practices.

(k) There are many regulators for them, but still there are many lacunae in their regulation. In fact, the existence of multiple regulatory authorities has come in the way of effective regulation, control and monitoring of COBs. The RBI had suggested a creation of a single regulatory body, but the proposal has not been accepted so far due to considerations of power politics, which afflicts the co-operative sector perhaps more than other sectors in India.

SUMMARY

- A co-operative bank is a financial entity which belongs to its members, who are at the same time the owners and the customers of their bank. The co-operative banks in India have evolved in four different phases.
- Co-operative banks continue to be a part of a set of institutions which are engaged in financing rural and agricultural development. This set-up comprises the RBI, NABARD, commercial banks, regional rural banks and co-operative banks.
- The urban areas are served by the urban co-operative banks (UCBs) with a single tier structure, and the rural areas are largely served by two distinct sets of institutions extending short-term and long-term credit.
- The short-term co-operative credit institutions have a three-tier structure comprising state co-operative banks (StCBs) at the apex level, district central co-operative banks (DCCBs) [previously known as central co-operative banks (CCBs)] at the intermediate level and primary agricultural credit societies (PACS) at the base level. The long-term co-operative credit institutions have, generally, a two-tier structure comprising the state co-operative agriculture and rural development banks (SCARDBs) [previously known as state land development banks (SLDBs)] at the state level and the primary co-operative agriculture and rural development banks (PCARDBs) [previously known as primary land development banks (PLDBs)] at the district or block level.
- The total number of co-operative banks and the number of their offices are much larger than those of commercial banks. They have achieved the widest geographical coverage.
- Co-operative banking is a small-scale banking. The average size of each type of co-operative bank is quite small.
- There has been quite an impressive growth in deposits, credit and working capital of these banks. The annual rate of growth of co-operative banks have been quite high, and are comparable with those of commercial banks.
- They function on 'no profit, no loss' basis. Co-operative banks perform all the main banking functions of deposit mobilisation, supply of credit and provision of remittance facilities.
- The co-operative banks are subject to CRR and liquidity requirements as other scheduled and non-scheduled banks are.
- The Reserve Bank of India has granted permission to StCBs and CCBs to participate in the payment system and offer RTGS/ECS/NEFT facilities to their customers/members.
- In a span of 60 years, co-operative banks have not really upgraded their performance by way of over-coming their weaknesses. Weak PACSs, uneven geographical growth, lack of self-reliance, infrastructural inadequacy, politicisation and officialisation of the banks are some of these weaknesses.

- The government and the RBI have taken a number of steps to improve the health and strength of co-operative banks in India. In keeping with other financial sector reforms, certain co-operative banking reforms also have been carried out after 1991.
- COBs have played a great role in developing short-term and long-term rural credit structure and microcredit dispensation system.
- UCBs have not performed really well; many of them have failed and many of them are under liquidation.
- Co-operative banks have played a significant role for microfinance and providing finance for self-help linkage programme.

KEY TERMS

Urban co-operative banks
Primary agricultural society
State co-operative banks
State co-operative agriculture and rural development banks
District central co-operative banks
Primary co-operative agriculture and rural development banks

QUESTIONS

1. Why the importance of co-operative banks has increased in India? Explain the nature of co-operative banks.
2. Highlight the different phases of evolution of co-operative banks in India.
3. How many types of co-operative banks exist in India? Analyse the structure and growth of all the co-operative banks during the post-independent period.
4. What are the special measures introduced by the government and RBI to revive and strengthen the co-operative banks in India?
5. Highlight the various reforms taken for the development of co-operative banks in the period of liberalisation in India.
6. What are the recommendations of the working group on issues concerning raising of capitals by urban co-operative banks?
7. What are the recommendations of the task force on revival of long-term rural co-operative credit institutions in India?
8. Provide a snapshot of growth of co-operative banks in India during the period of liberalisation.
9. What are the major weaknesses of co-operative banks in India?

Part 4

Non-Bank Financial Intermediaries and Statutory Financial Organisations

The chapters in this part deal with the functioning of the various non-bank financial intermediaries and special financial institutions (also known as All India Financial Institutions). Overall, the chapters in this part discuss the growth, significance and functioning of the Small Savings Organisations, Provident Funds, New pension System (NPS), Insurance Companies, Mutual Funds, Non-Bank Financial Intermediaries like Asset Finance Company, Loan Company, Investment Company, Housing Finance Companies, Merchant Banks, Venture Capitals, NABARD, Credit Rating Agencies and so on.

CHAPTERS

10. Small Savings, Provident Funds, and Pension Funds

11. Insurance Companies

12. Mutual Funds

13. Miscellaneous Non-Bank Financial Intermediaries

14. Non-Bank Statutory Financial Organisations

Small Savings, Provident Funds and Pension Funds

10 CHAPTER

Learning Objectives

- **LO 1** Know small savings in detail—types of instruments growth, composition and interest rates
- **LO 2** Understand provident fund, rates of return of provident fund accounts, and their investment pattern
- **LO 3** Review pension funds in India
- **LO 4** Discuss New Pension System or National Pension System (NPS): Architecture, features, investments, and challenges

10.1 INTRODUCTION

In the previous two chapters, we have discussed the working of banking institutions. Before we turn to non-banking institutions, it is convenient and useful to familiarise ourselves with two very important, highly popular and diversified savings media namely, small savings, provident funds, and pension funds. Post-offices function as banks in respect of mobilisation of savings and time deposits, but not in respect of mobilisation of funds in the form of certificates. Because of the difficulty of making a strict categorisation and for convenience, post-office savings are included here. Provident funds are a category by themselves. Both small savings and provident funds supply budgetary resources to the government. In the recent years, the importance of pension funds has increased due to the introduction of New Pension System in India. This chapter first discusses about the issues and developments related to small savings (post office savings) followed by provident fund and pension fund.

10.2 IMPORTANCE AND CHARACTERISTICS OF SMALL SAVINGS

LO 1 Know small savings in detail—types of instruments growth, composition and interest rates

If we compare forms of financial savings, next to commercial banks, the small savings organisations mobilise the largest volume of savings, followed by co-operative banks. In a country like India, where small savers predominate and where savers are dispersed over a vast area in innumerable villages, the work of small savings organisations assumes great significance not only in quantitative, but also in qualitative terms. Even after two decades of nationalised banking, it

is the agency of post-offices, through which small savings schemes are administered, which has reached the largest number of villages in India. Small savings are directly available to the central government as a part of its budgetary resources and they constitute the non-marketable debt of the government. Although the entire volume of small savings is technically available to the central government, in practice it has been shared with the state governments in a specified manner. Small savings media can be divided into two groups: (a) post office deposits, and (b) savings certificates and bonds. A number of important characteristics of the small savings media are as follows:

(1) These assets represent *medium-term* and *long-term investment opportunities.* They are a good substitute, from the point of view of spread of maturity, liquidity and safety, for other investment media such as bank deposits, debentures, government securities, and units. (2) Many of them are in the form of *re-investment plans.* Therefore, they offer good opportunities to those investors who can forgo current income; they are also desirable from the point of view of mitigating inflationary pressures. (3) These assets are *liquid.* (4) POSB deposits are as liquid as bank demand deposits, perhaps a little more so. They can be withdrawn by cheque, and there are no restrictions on the number of withdrawals. It is for this reason that the RBI now includes these deposits as one of the constituents of money supply in the economy. (5) As with unit-linked insurance plans, recurring deposits and cumulative time deposits provide insurance cover to the investor. A small saver in RD and CTD is eligible for the benefit of protection of his contemplated savings in the event of his death before the maturity value of the account. His heir or nominee is entitled to get the full amount of the account as if the depositor had continued to make deposit till the end of the maturity period. (6) Finally, for those who belong to the income-tax brackets, small savings carry excellent tax benefits.

10.3 TYPES OF INSTRUMENTS IN THE SMALL SAVINGS MEDIA

10.3.1 Post Office Savings Account

This scheme has been in existence since 1896. At present, it pays 4.0 percent rate of interest on individual/ joint accounts. The minimum investment is ₹20 for opening the account. Account can be opened by cash only. Minimum balance to be maintained in a non-cheque facility account is ₹50. Cheque facility is available if an account is opened with ₹500 and for this purpose minimum balance of ₹500 in an account is to be maintained. Cheque facility can be taken in an existing account also. Interest earned is tax free up to ₹10,000 per year from financial year 2012–2013. Nomination facility is available at the time of opening and also after opening of account. Account can be transferred from one post office to another. One account can be opened in one post office. Account can be opened in the name of minor and a minor of 10 years and above age can open and operate the account. Joint account can be opened by two or three adults. At least one transaction of deposit or withdrawal in three financial years is necessary to keep the account active. Single account can be converted into joint and *vice versa*. Minor after attaining maturity has to apply for conversion of the account in his name. Deposits and withdrawals can be done through any electronic mode in core banking solution (CBS) post offices. Inter-post office transactions can be done between CBS post offices. ATM/Debit cards can be issued to savings account holders (having prescribed minimum balance on the day of issue of card) of CBS post offices.

10.3.2 Post Office Recurring Deposit Account (RD)

This scheme has been in existence since April 1970. Its maturity period is five years. It can be continued for another 5 years on year to year basis. From 1.10.2016, the interest rate is 7.3 percent per annum (quarterly compounded). The minimum amount of ₹10 per month or any amount in multiples of ₹5 can be deposited in this account. There is no maximum limit. Account can be transferred from one post office to another. Any number of accounts can be opened in any post office. Account can be opened in the name of minor and a minor of 10 years and above can open and operate the account. Joint account can be opened by two adults. Subsequent deposit can be made up to 15th day of the next month if account is opened up to 15th of a calendar month, and up to last working day of next month if account is opened between 16th day and last working day of the calendar month. If subsequent deposit is not made up to the prescribed day, a default fee is charged for each default. The default fee is 5 paisa for every ₹5. After four regular defaults, the account becomes discontinued and can be revived in 2 months, but if the same is not revived within this period, no further deposit can be made. If in any RD account, there is monthly default(s) the depositor has to first pay the defaulted monthly deposit with default fee and then pay the current monthly deposit. There is rebate on advance deposit of at least six instalments. Single account can be converted into joint and *vice versa*. One withdrawal up to 50 percent of the balance is allowed after one year.

10.3.3 Post Office Monthly Income Scheme Account (MIS)

This fixed deposit scheme was introduced in August 1987. Its maturity period is 5 years. Interest rate is 7.70 percent per annum and interest is payable every month effective from 1.10.2016. Maximum investment limit is ₹4.5 lakh in single account and ₹9 lakhs in joint account. The deposits can be made in multiples of ₹1500. Account can be transferred from one post office to another. Any number of accounts can be opened in any post office subject to maximum investment limit by adding balance in all accounts. Account can be opened in the name of minor and a minor of 10 years and above can open and operate the account. Minor after attaining majority has to apply for conversion of the account in his name. Interest can be drawn through auto credit into savings account present at same post office. It can be prematurely encashed after one year but before 3 years at the discount of 2 percent of the deposit and after 3 years at the discount of 1 percent of the deposit. (Discount means deduction from the deposit). A bonus of 5 percent on principal amount is admissible on maturity in respect of MIS accounts opened on or after 8.12.07 and up to 30.11.2011. No bonus is payable on the deposits made on or after 1.12.2011.

10.3.4 Post Office Time Deposit Account (TD)

Post offices have been accepting time deposits of one-year, three-year and five-year maturity since March 1970, and two-year maturity since August 1973. Interest payable annually but calculated quarterly. From 1.10.2016,the interest rates on time deposits ranging between 7 and 7.8 percent for the different maturity periods. Minimum limit is ₹200 and in multiple thereof and there is no maximum limit. Account may be opened by an individual. The investment under 5 years TD qualifies for the benefit of Section 80C of the Income Tax Act, 1961 from 1.4.2007. In CBS Post offices, when any TD account is matured, the same TD account will be automatically renewed for the period for which the account was initially opened, e.g. 2 Years TD account will be automatically renewed for 2 years. Interest rate applicable on the day of maturity will be applied.

10.3.5 Senior Citizen Savings Scheme (SCSS)

An individual of the age of 60 years or more may open the account. An individual of the age of 55 years or more but less than 60 years who has retired on superannuation or under VRS can also open account subject to the condition that the account is opened within one month of receipt of retirement benefits and amount should not exceed the amount of retirement benefits. There shall be only one deposit in the account in multiple of ₹1000 and maximum limit is ₹15 lakh. From 1.10.2016, interest rate for this type of deposit is 8.5 percent per annum. Maturity period is 5 years. A depositor may operate more than one account in individual capacity or jointly with spouse (husband/wife). Account can be opened by cash for an amount below INR 1 lakh and for INR 1 lakh and above by cheque only. Account can be transferred from one post office to another. Any number of accounts can be opened in any post office subject to maximum investment limit by adding balance in all accounts. In case of SCSS accounts, quarterly interest shall be payable on 1st working day of April, July, October and January. It will be applicable at all CBS post offices. Quarterly interest of SCSS accounts standing at CBS post offices can be credited in any savings account standing at any other CBS post offices. Premature closure is allowed after one year on deduction of an amount equal to 1.5 percent of the deposit and after 2 years 1 percent of the deposit. After maturity, the account can be extended for further 3 years within one year of the maturity by giving application in prescribed format. In such cases, account can be closed at any time after expiry of one year of extension without any deduction. TDS is deducted at source on interest if the interest amount is more than ₹10,000 per annum. Investment under this scheme qualifies for the benefit of Section 80C of the Income Tax Act, 1961 from 1.4.2007.

10.3.6 National Savings Certificates (NSC)

National Savings Certificate (NSC) is a single holder type certificate that can be purchased by an adult for himself or on behalf of a minor or by a minor. Three issues (II, III, IV) of seven-year NSCs were introduced in 1970, out of which II was discontinued from April 1989. Issue V of seven-year NSCs was introduced in April 1974. Two six-year NSCs (VI and VII issues) were introduced in 1981–1982 but they have been discontinued from April 1989. Another six-year NSCs (VIII) issue was introduced in May 1989. Currently, five-year National Savings Certificate (VIII Issue) has also been introduced. From 1.10.2016, interest rate for NSC is 8.0 percent compounded half yearly. Minimum amount of investment is ₹100 and it has no maximum limit. In case of NSC VIII, transfer of certificates from one person to another can be done only once from date of issue to date of maturity. At the time of transfer of certificates from one person to another, old certificates will not be discharged. Name of old holder shall be rounded and name of new holder shall be written on the old certificate and on the purchase application (in case of non CBS post offices) under dated signatures of the authorized postmaster along with his designation stamp and date stamp of post office. Deposits qualify for tax rebate under Section 80C of IT Act.

10.3.7 Kisan Vikas Patra (KVP)

Introduced in April 1988, they also have a maturity period of 7 years and 8 months and the interest paid on them is 10.30 percent. The amount invested gets doubled in 112 months (9 years and 4 months). It is available in denominations of ₹1000, 5000, 10,000 and 50,000. Minimum deposit is ₹1000 and there is no maximum limit. Certificate can be purchased by an adult for himself or on behalf of a minor or by two adults. KVP

can be purchased from any departmental post office. Facility of nomination is available. Certificate can be transferred from one person to another and from one post office to another. Certificate can be encashed after 2.5 years from the date of issue. Investment under this scheme qualifies for the benefit of Section 80C of the Income Tax Act, 1961 from 1.4.2007.

10.3.8 Sukanya Samriddhi Accounts

A legal guardian/natural guardian can open account in the name of a girl child. A guardian can open only one account in the name of one girl child and maximum two accounts in the name of two different girl children. Account can be opened up to age of 10 years only from the date of birth. For initial operations of scheme, one year grace has been given. With the grace, girl child who is born between 2.12.2003 and 1.12.2004 can open account up to 1.12.2015. If minimum ₹1000 is not deposited in a financial year, account will become discontinued and can be revived with a penalty of ₹50 per year with minimum amount required for deposit for that year. Partial withdrawal, maximum up to 50 percent of balance standing at the end of the preceding financial year can be taken after account holder's attaining age of 18 years. Account can be closed after completion of 21 years. Normal premature closure will be allowed after completion of 18 years provided that girl is married. Rate of interest is 8.5 percent per annum (with effect from 1.10.2016), calculated on yearly basis, compounded annually. A minimum investment of ₹1000 and maximum of ₹1,50,000 can be made in a financial year. And subsequent deposit in multiples of ₹100 is required and deposits can be made in lump-sum. There is no limit on number of deposits either in a month or in a financial year.

Table 10.1 Small saving schemes in force in 2015–2016

Name of the scheme	*Limits of investment*	*Maturity period (years)*	*Rate of interest at end October 2016 (percent per annum)*	*Deductions under sec 80C of Income tax Act*	*Amount outstanding at end March 2016 (₹ Crore)*
Post office savings bank account	Minimum ₹20 and maximum ₹1,00,000 for an individual account (₹2 lakh jointly)	Open-ended scheme	4.0	No	61,567
Public provident fund 1968	Minimum ₹500 and maximum ₹1,50,000 in a financial year	15	8.0 (compounded annually)	Yes	57,603
Post office time deposit account	Minimum ₹200 and no maximum limit	1,2,3 and 5	7.0, 7.10, 7.30 and 7.8, respectively, (calculated quarterly)	yes	70,635
Post office recurring deposit account	Minimum ₹10 per month or any amount in multiples of ₹5 and no maximum limit	5 years	7.3 (compounded quarterly)	No	76,179
Post office monthly income scheme	Minimum ₹1500 and maximum ₹4.5 lakh in single account and ₹9 lakh in joint account	5	7.70 (payable monthly)	No	1,93,808
NSC VIII issue	Minimum ₹100 and no maximum limit	5	8.00	Yes	88,139

(*Contd.*)

Kisan Vikas Patra	Minimum ₹1000 and no maximum limit	112 months	7.70	No	64,858
Senior Citizen Savings Scheme	Minimum ₹1000 and maximum limit ₹15 lakh	5	8.50 (payable quarterly)	Yes	22,876
Sukanya Samriddhi Accounts	Minimum ₹1000 and maximum ₹1,50,000	14	8.50	No	-

Source: Government of India, Department of Post Office.

Table 10.1 presents relevant information on various small savings schemes in force in India in 2015–2016. The importance of post office saving schemes has increased due to tax advantage of these instruments and high relative return for some of the schemes. Among all the schemes, the volume of post office monthly income scheme has been the highest followed by post office recurring deposits.

10.4 GROWTH, COMPOSITION AND INTEREST RATES ON SMALL SAVINGS

The growth in the volume of small savings and their distribution among different major schemes are presented in Table 10.2. The yearly receipts as well as outstanding of small savings has increased phenomenally over the years. The monthly income and recurring deposits schemes have been attracting many investors. Small savings organisations, rather surprisingly, have not been able to induce investors to hold more time deposits with themselves. During 2000–2001 to 2015–2016, the yearly deposits as well as outstanding of small savings have increased. Among the deposits, monthly income scheme has been the most popular scheme followed by recurring deposits. Among the certificates, again NSC VIII issues are the most accepted small savings schemes in India during this period. The competition from commercial banks in rural areas appears to have had an adverse effect on the growth of deposits with post offices.

Table 10.2 Receipts and outstanding of small savings schemes (₹ in Crore)

Sr. no.	*Scheme*		*1990–1991*	*2000–2001*	*2010–2011*	*2011–2012*	*2012–2013*	*2013–2014*	*2014–2015*	*2015–2016*
1.	Post Office Saving Bank Deposits	Receipts	4253	12279	84354	85905	83900	94650	114229	157415
		Outstanding	4205	8830	30101	34070	37850	43017	47428	61567
2.	National Saving Scheme, 1987 & 1992	Receipts	2085	1043	494	151	140	85	47	57
		Outstanding	4592	3681	4709	4465	4289	4146	3921	3618
3.	Monthly Income Scheme	Receipts	873	16359	56693	28424	19049	17991	21569	31526
		Outstanding	2340	42560	218674	205288	201787	202085	200557	193808
4.	Post Office Time Deposits	Receipts	746	—	—	—	19153	24674	33069	42453
		Outstanding	2973	—	—	—	33009	40714	51757	70635
5.	Post Office Recurring Deposits	Receipts	1428	—	—	—	35899	38646	41824	40315
		Outstanding	2638	—	—	—	67962	74149	74513	76179

(*Contd.*)

6.	Senior Citizen Scheme	Receipts	—	—	11395	2986	1978	1994	3011	10321
		Outstanding	—	—	30913	26763	24093	22492	17975	22876
	Total deposits	Receipts	9385	29681	152936	117466	160119	178040	213749	282087
		Outstanding	16748	55071	284397	270586	368990	386603	396151	428683
7.	National Savings Certificate VIII issue	Receipts	1609	—	—	—	19102	16924	16584	9826
		Outstanding	3135	—	—	—	64719	75086	85608	88139
8.	Indira Vikas Patra	Receipts	2469	—	—	—		4	4	0
		Outstanding	8709	—	—	—	907	896	887	891
9.	Kisan Vikas Patra	Receipts	4136	—	—	—	27	18	554	1466
		Outstanding	9514	—	—	—	128375	106754	84841	64858
	Total certificate	**Receipts**	**8214**				**19129**	**16946**	**17142**	**11292**
		Outstanding	**21358**				**194001**	**182736**	**171336**	**153888**
11.	Public Provident Fund	Receipts	—	—	—	—	7221	7074	8157	7791
		Outstanding	—	—	—	—	41121	46608	52748	57603
12.	**Total**	**Receipts**	**17599**	**29681**	**152936**	**117466**	**186469**	**202060**	**239048**	**301170**
		Outstanding	**38106**	**55071**	**284397**	**270586**	**604112**	**615947**	**620235**	**640174**

Source: RBI, Bulletins, Various Issues (December).

Table 10.3 Interest rates on small savings

(*Percentage*)

Schemes	*1969–1970*	*1973–1974*	*1978–1979*	*1988–1989*	*2002–2003*	*2006–2007*	*2013–2014*	*2015–2016*
POSB Deposits*	3.5	5.0	5.5	5.5	3.5	3.50	4.00	4.0
CTD (10 year)	4.5 (compound)	6.25	6.75	—	—	—	—	—
Time Deposits*								
1 year	5.50	8.0	8.0	9.5	6.25	6.25	8.40	7.0
2 year	—	8.50	8.5	10.0	6.5	6.25	8.40	7.1
3 year	6.25	9.0	9.0	10.5	7.25	6.50	8.40	7.3
5 year	6.75	10.0	10.5	11.0	7.5	7.25	8.50	7.8
Recurring deposit#	—	—	10.5	11.0	12.5	7.50	12.5	7.3
NSCs*								
I issue	5.0	6.0	6.5	—	—	7.5	—	—
II issue	5.0	6.0	6.0	—	—	8.0	—	—
III issue	7.25	10.25	10.25	—	—	—	—	—
V issue	—	8.25	10.75	—	—	—	—	—
VIII Issue	—	—	—	12.0	8.0	—	8.50	8.00
IX Issue	—	—	—	—	—	—	8.80	8.80
National Development bonds@	—	—	10.5	—	—	—	—	—
Indira Vikas Patra*	—	—	—	14.87	Discontinued from 01.12.2011	—	—	—

(*Contd.*)

Kisan Vikas Patra*	—	—	—	13.43	10.3	7.5	—	7.70
National Saving Scheme	—	—	—	11.0	7.5	7.0	—	—
Monthly Saving Scheme$	—	—	—	12.0	8.0	9.0	8.40	7.70
Senior Citizen Savings Scheme@@	—	—	—	—	—	—	9.20	8.5
15 year Public Provident Fund Account##	—	—	—	—	—	—	8.70	8.00

Source: GOI, Department of Post Office.

*Notes: *denotes percent per annum, #denotes compounded quarterly, @denotes bonus of 10 percent of the deposited amount at the time of repayment of maturity. @@ denotes payable quarterly, ## denotes compounded annually.*

The rates of return on small savings have undergone a distinct change over the years, particularly after 1970. Before 1968–1969, interest rates on various small savings schemes were lower than those offered by banks, private non-banking companies and others. After 1969–1970, however, interest rates on these schemes were made comparable; and they are more attractive than the rates on bank deposits till about 2000. What is more important is that, unlike in the earlier period, interest rates on small savings changed simultaneously with changes in the bank rate and other rates of interest in the economy till 2000. Earlier,there was a tendency for changes in interest rates on small savings to lag behind changes in rates offered by competing financial intermediaries. However, changes in these rates were made an integral part of changes in the interest rates structure in the economy. The level of interest rates on small savings, and changes in them which have occurred over the past many years are shown in Tables 10.1 and 10.3. It may be noted that the authority's current preference for 'soft interest rates' has resulted in a drastic cut in interest rates on small savings after about 1999–2000. The interest rates on small savings have been quite low in India because of soft interest rate policy during the period 2001–2002 to 2004–2005. In the recent years, due to excess liquidity, the interest rates have increased to maintain the price stability. In this context, the small savings rates have increased during 2006–2007 to 2013–2014. In the year 2015–2016, there has been a slight decline in the various interest rates due to less liquidity in the market.

10.5 PROVIDENT FUNDS

LO 2

Understand provident fund, rates of return of provident fund accounts, and their investment pattern

This is a way of saving mostly by people who earn their income in salaries. However, recently, with the starting of the Public Provident Fund Scheme, it is possible for non-salaried earners also to save in this form. Saving in PFs is a contractual obligation, and the main motive behind saving in this form is not to make profits or to seek capital growth. Salaried people can save in this form small amount on a regular basis to provide for old age or for the family after one's death. There are a variety of PF schemes in operation in India. The popular operational provident fund accounts available in India are (i) General Provident Fund (GPF), (ii) Employees' Provident Fund Scheme (EPF), and (iii) Public Provident Fund (PPF). Within that there are some specific provident fund schemes also available in India. All these include (i) Contributory Pension Fund (CPF), (ii) All India Services Provident Fund, (iii) State Railway Provident Fund, and (iv) Armed Forces

Personal Provident Fund and so on. The following section discusses about the detailed features of most popular provident funds like GPF, CPF, EPF and PPF.

10.5.1 General Provident Fund (GPF)[1]

All temporary government servants after a continuous service of one year, all re-employed pensioners (other than those eligible for admission to the Contributory Provident Fund) and all permanent government servants are eligible to subscribe to the fund. A subscriber, at the time of joining the fund is required to make a nomination, in the prescribed form, conferring on one or more persons the right to receive the amount that may stand to his credit in the fund in the event of his death, before that amount becomes payable or having become payable has not been paid.

A subscriber shall subscribe monthly to the fund except during the period when he is under suspension. Subscriptions to provident fund are stopped 3 months prior to the date of superannuation. Rates of subscription shall not be less than 6 percent of subscriber's emoluments and not more than his total emoluments. Rate of interest on GPF accumulations at present is 12 percent compounded annually. The rules are provided for withdrawal of advances/withdrawals from the fund for specific purposes.

The purposes for which customers can withdraw their general provident fund amount are as follows: (i) purchase of consumer durables, (ii) education, (iii) illness, (iv) purchase of land for housing, (v) buying home, (vi) construction/reconstructing the house, (vii) repayment of outstanding mortgage, (viii) renovation of ancestral home, (ix) Overhauling/extensive repairs of motor car, (x) making deposit to book scooter moped/ motor cycle/motor car, (xi) purchase of scooter/motor cycle/motor car or repayment of loan taken to purchase scooter/motor cycle/motor car, and so on. There are limits for withdrawal and it varies across the purposes of withdrawal. The GPF scheme is not available for the central government employees since 1st January, 2004.

10.5.2 Contributory Provident Fund (CPF)

The CPF rules are applicable to every non-pensionable servant of the government belonging to any of the services under the control of the President. A subscriber, at the time of joining the fund is required to make a nomination in the prescribed form conferring on one or more persons the right to receive the amount that may stand to his credit in the fund in the event of his death, before that amount has become payable or having become payable has not been paid.

A subscriber shall subscribe monthly to the fund when on duty or foreign service but not during a period of suspension. Rates of subscription shall not be less than 10 percent of the emoluments and not more than his emoluments. The employer's contribution at that percentage prescribed by the government will be credited to the subscriber's account and this is presently 10 percent. Rate of interest, at present, is 12 percent compounded annually. The rules are provided for withdrawal of advances/withdrawals from the CPF for specific purposes. As in GPF rules, the CPF rules also provide for deposit linked insurance revised scheme.[2]

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[1]http://persmin.nic.in/Pension_Rules.asp

[2]On the death of a subscriber, the person entitled to receive the amount standing to the credit of the subscriber shall be paid an additional amount equal to the average balance in the account during the 3 years immediately preceding the death of the subscriber subject to certain conditions provided in the relevant rule. The additional amount payable under that rule shall not exceed ₹60,000. To get this benefit, the subscriber should have put in at least 5 years of service at the time of his/her death.

Earlier, the government was giving option to CPF subscribers to switch over from CPF scheme to GPF scheme (pension scheme). The last such option was allowed based on the recommendations of fourth CPC. As a number of options have already been allowed as and when substantial improvement were made in the pension scheme and the practical difficulties involved in retrieval of records and adjustments to be made, demand for further option was not recommended by the fifth CPC and there is no proposal with the government to consider any further change in options.

10.5.3 Employee Provident Fund (EPF)

The EPF scheme for industrial workers was introduced with the passage of the Employees' Provident Fund Act, 1952. Originally, public sector units were not covered under this Act, but since 1958 they have also been brought under it. This scheme is provided for provident fund system on contributory basis by the employers and employees at equal rate. It made available to the employee concerned the accretions in the Provident Fund account with interest in lump sum on retirement or leaving the job. This scheme is applicable for all the establishments having more than 20 employees. An employee who earns less than ₹15,000, basic salary must contribute to the employee provident fund. PF contribution is voluntary for those who earn more than ₹15,000 as basic salary. The minimum contribution of the employee is 12 percent of the total pay (basic + dearness allowances) and it can go up to 100 percent of his/her total pay. The employers' contribution is 12 percent of the pay. Out of 12–8.33 percent goes to employee pension scheme. The government fixes the interest rate of EPF every year. The interest rate is linked to the 10-year yield of the government bond.

Every EPF member is given a Universal Account Number (UAN) and EPF member ID with first employment. The UAN does not change with the change of job. This portable number helps the employee to transfer the PF balance while changing the job. The PF member ID changes with every job, which is given by the employer. An employee is allowed to make a nomination conferring on one or more persons the right to receive the provident fund amount. If an employee nominates more than one person, he/she should specify the amount or share payable to each of the nominees in the nomination. Advances can be withdrawn from PF account for some specific purposes. The employee gets the total PF balance with interest at the time of retirement.

10.5.4 Public Provident Fund (PPF)

A novel scheme, namely, Public Provident Fund, was introduced in 1968. This was earlier operated through the SBI and its subsidiaries, but with effect from January 1979, PPF account can also be opened at head post offices. It was originally meant for self-employed persons or the general public, but now salaried employees can also take advantage of it. The account holder should deposit a minimum of ₹500 in order to open and maintain PPF account and the maximum that can be deposited is ₹1.5 lakh per annum.

Any resident of India is eligible for this account. Only one PPF account can be opened and maintained per individual except for accounts that are opened on behalf of minors. Non-Resident Indians (NRIs) are not eligible for a PPF account. It is a 15 years scheme and the account matures only after 15 years. Partial premature withdrawals can be made every year from year 7 with certain conditions. There is no room for premature withdrawal with PPF. Interests are tax-free and deposited amounts are tax deductible U/S 80C of the Income Tax Act. Withdrawals are exempted from wealth tax. In case of death of the account holder, the nominee will be given the amount from the fund. Interest rates of the PF accounts are announced by the

central government periodically, usually annually. Interest earned is compounded yearly. The current rate of interest on a PPF account is fixed at 8.1 percent p.a. There are certain advantages of PPF account. All these advantages are as follows:

- With a deposit period of 15 years and a lock-in period of 7 years, these accounts serve long-term investment goals.
- With interest rates compounded annually, effective returns tend to be more attractive *vis-a-vis* bank FDs.
- Long-tenures, compounded, tax-free returns and capital protection make this an ideal option for building a retirement corpus.
- Tax-free interest and withdrawals and tax-deductible investments.
- Being government-backed, there is low risk of default.
- PPF accounts can be opened at nationalised, public banks or post offices and selected private banks, all of which should have wide reach. Accounts can be opened online as well.

10.6 RATES OF RETURN OF PROVIDENT FUND ACCOUNTS

The rate of return on contributions to PFs has become quite attractive. The effective rate of return on PF is much higher because of the income-tax and wealth-tax benefits, which the yearly contribution to PF, interest on PF and the wealth in the form of PF enjoy. Table 10.4 shows the GPF, EPF and PPF rates during the period 2000–2001 to 2015–2016. It is evident from Table 10.4 that the interest rates on GPF and PPF are same across the years. The EPF rate was same or higher than these two rates up to 2010–2011, but after that the EPF rate has declined and during the period 2011–2012 to 2015–2016 this rate is below the GPF and PPF rates.

Table 10.4 Interest Rates of GPF, EPF and PPF

Year	*GPF*	*PPF*	*EPF*
2000–2001	11	11	11
2001–2002	9.5	9.5	9.5
2002–2003	9.0	9.0	9.5
2003–2004	8.0	8.0	9.5
2010–2011	8.0	8.0	9.5
2011–2012	8.6	8.6	8.25
2012–2013	8.8	8.8	8.5
2013–2014	8.7	8.7	8.75
2014–2015	8.7	8.7	8.75
2015–2016	8.7	8.7	8.8

Source: Employee Provident Fund Organization, India.

10.7 INVESTMENT PATTERN OF PF FUNDS

Tables 10.5 and 10.6 present the investment pattern of PF funds as on April 2015. It is observed that the funds in the PF are mostly invested in the government securities, debt instruments and term deposits in the banks.

This implies that money available in the PF funds is invested in the regular income generating instruments as there is a fixed obligation of the payments for the provident fund holder.

Table 10.5 Investment pattern of provident funds since 1st April, 2015

Sl. No.	*Instruments*	*Limit*
1	Government Securities	45– 55%
2	Debt Securities and Term Deposits of Banks	35– 45%
3	Money Market Instrument	Up to 5%
4	Equity and Equity Related Instruments	5– 15%
5	Exchange Traded Funds/Index Funds	5– 15%
6	Asset Backed Securities, Units of Real Estate, Infrastructure Investment Trusts	Up to 5%

Source: http://pib.nic.in/newsite/PrintRelease.aspx?relid=116214

Table 10.6 The break-up of investments of the provident fund as on 31st March, 2015

(₹ in Crore)

Sl. No.	*Categories of Investments*	*Holding at Face Value*	*% age Holding*
1.	Central Govt. Securities (CGS)	97775.37	25.77%
2.	State Government Securities (SGS)	77973.36	20.55%
3	Govt. Guaranteed Securities (GGS)	13681.35	3.61%
4.	Special Deposit Schemes (SDS)	52845.36	13.93%
5.	Public Sector Financial Institutions(PSFI)@	137183.07	36.15%
	Total	**379458.51**	**100.00%**

@ *(including Private Sector Bonds/Securities).*
Source: EPFO, Annual Report 2014–2015.

10.8 GROWTH OF PFS IN INDIA

The members of the employees provident fund organisation have increased gradually and their contribution towards the provident fund, pension fund, and deposit linked fund have increased continuously during 2003–2004 to 2014–2015 due to the new pension system in India (Table 10.7).

Table 10.7 Employees provident fund organisation (₹ in Crore)

Items	*2006–2007*	*2007–2008*	*2008–2009*	*2009–2010*	*2010–2011*	*2011–2012*	*2012–2013*	*2013–2014*	*2014–2015*
Members (lakhs) constitutes	444.04	449.19	470.72	587.86	615.89	855.4	887.62	1178.13	1584.7
Contributions of members									
Provident Fund	19462.08	24667.21	28659.35	48650.8	47280.35	55554.95	60256.8	75702.58	88723.27
Pension Fund	8050.66	9012.46	10487.78	10924.52	12887.94	14767.47	16124.01	18361.73	24251.5

(*Contd.*)

Deposit Linked Insurance	250.65	308.44	368.4	423.22	480	566.4	620.13	697.78	936.12
Investments									
Provident Fund	21973.33	25191.05	29010.2	35459.59	46416.95	58622.28	63018.76	81021.26	103071.87
Pension Fund	10857.09	12495.2	14476.86	15212.15	18260.39	19729.26	21625.28	24280.24	81021.26
Deposit Linked Insurance	614.55	744.68	877.11	1016.13	1165.9	1319.93	1433.25	1620.16	63018.76

Source: EPFO Annual Report Various issues.

10.8.1 Factors Promoting Growth of PFs in India

Several factors have contributed to the growth of provident funds in India: (a) the adoption of statutory measures to make provident fund compulsory for industrial and other establishments; (b) the increase in the number of establishments covered under the statutory provisions; (c) the expansion in the industrial and service sector of the economy and the consequent increase in the number of salary-earners; (d) the introduction of a novel scheme like PPF; (e) the provision of tax benefits to such savers; (f) the increase in the minimum rates of contribution by the employees and employers; (g) the changes in the pay structure, like raising the basic pay of employees; and (h) the increase in the level of money income in the economy.

10.9 PENSION FUNDS

LO 3
Review pension funds in India

The financial intermediary, or an organisation, or an institution, or a trust that manages the assets and pays the benefits to the old and retirees is called a pension fund (PNF). Pension Funds (PNFs) have grown rapidly to become the primary vehicle of retirement benefit or retirement saving, and retirement income in many countries. A Pension Plan (PP) is an arrangement to provide income to participants in the plan when they retire. PPs are generally sponsored by private employers, government as an employer and labour unions. Some pension plans are said to be insured, that is, in such cases the sponsor pays premiums to a life insurance company in exchange for a group annuity that would pay retirement benefits to the participants. They may be Funded Pension Plans (FPPs)or Unfunded Pension Plans (UPPs). If the benefits promised by the PP are secured by assets specifically dedicated for that purpose, it is called an FPP. If the fulfilment of the promised benefits by the sponsor depends on the general credit and not by any specific contribution to be made year after year, it is called an UPP. There may also be Individual Retirement Pension Plans (IRPPs).

10.10 CLASSIFICATIONS OF PENSION PLANS

The pension plans can be classified as: (a) Defined Benefits Pension Plan (DBPP), (b) Defined Contribution Pension Plan (DCPP) or Money Purchase Pension Plan (MPPP), (c) Pay-as-you-go Pension Plan (PAYGPP).

Pay-As-You-Go Pension Plan (PAYGPP): In most European countries, including France and Germany, pensions are paid through PAYGPP, under which the current employees pay a percentage of their income to provide for the old, and this, along with the contribution of the state, goes as a pension that sustains the older generation.

Defined Benefits Pension Plan (DBPP): Under DBPP, the final pension is pre-defined based on the final salary and the period of service. Most of the pension plans offered by public sector enterprises and the government as employer in India are of DBPP variety. This type ensures a predictable amount of pension to the employees for all the years after their retirement and it is guaranteed by the State. DBPPs involve considerable cost to the employer. The firms with DBPP typically establish a legally separated trust fund, and the trustees invest employers' contributions in shares and bonds.

Defined Contribution Pension Plan (DCPP): DCPPs, popular in US, do not guarantee the amount of final benefit which the employees would get after they retire. In DCPP, the employee and employer make a pre-determined contribution each year, and these funds are invested over the period of time till the retirement of employee. Whatever the value of these investments at the time of retirement, the employee will get a certain amount which he would use to purchase an annuity. From the point of view of the employer, DCPP is also known as 'money purchase pension plan'.

10.11 MANAGEMENT OF PENSION FUNDS

Some sponsors of pension plans manage their pension funds themselves, but most of the sponsors appoint a trustee to do so on their behalf. This trustee is usually a trust department of a commercial bank, or an insurance company or a mutual fund. The trustee-manager invests contributions provided by the sponsor and pays benefits to the retired persons. In the case of DBPPs, the assets of the PNF remain the property of the sponsor, who sets general investment policy in respect of portfolio composition, target return, quality of securities, and so on. The fund manager takes day-to-day decisions on buying or selling specific assets. Some large sponsors may divide the management of their PNFs among several trustee-managers. There are certain advantages in managing PNFs by outside trustees: (a) Transaction costs are lower. The trustee has greater expertise and he possesses all the necessary personnel, equipment and expertise in regulatory requirements. (b) It enhances the credibility of the pension plan. The flows of funds into and out of PNFs are generally steady and predictable. The amount of contributions to the pension plan by the participants (employees) and sponsors (employers) are known in advance. In the management of PNFs, therefore, liquidity is not a major concern. The return and risk are the dominant considerations. Consequently, PNFs invest mostly in long-term, high-yielding assets. It has been observed that generally DBPPs have a greater interest in fixed income securities, while DCPPs have a greater interest in equities. Both of these types of PNFs also invest substantial part of their resources in pooled funds that is insurance companies and mutual funds.

Many employers (companies) encourage their employees to invest a considerable part of their retirement savings in the stock of companies in which they are employed. But this is not desirable because it goes against the principle of prudent investment namely, diversification. Therefore, in certain countries (*viz*. UK), the maximum of 5 percent of pension funds can be invested in one's own company by the employees. The basic investment maxim for the PNFs is the instrument-wise and geographical area-wise diversification of investments of accumulated funds. Similarly, the investments of PNFs should be such as to match the cash flow with pension liabilities, which can be achieved if investment is made in a combination of long bonds and assets, which are weakly related. In many developed countries, the PNFs have become the biggest institutional players in the securities markets. The PNFs are generally managed professionally and they generate good returns. Many countries have encouraged active participation of the private sector companies in pension funds

field. This has contributed to the development of active financial markets, and the availability of contractual savings for infrastructure projects. It is found that in those countries, PNFs broadly invest their resources inequities, corporate bonds and government securities. The rapid growth of PNFs abroad has had a significant impact on the financial securities markets in respective countries. There has been an intense competition to manage the resources of PNFs which happen to be huge in amount. The insurance companies, mutual funds, bank trust departments are found to be competing furiously in this regard. The sheer size of PNFs has made them an important factor in the markets for long-term securities. The PNFs in US held only one percent of outstanding US equity in 1952, but it increased to 25 percent by 2003. The desire of PNFs to reap higher returns on equities without incurring very high risk has created a strong demand for hedging products. Some PNFs have diversified internationally by investing in foreign stocks and bonds. It is said by some that PNFs have been in the forefront of globalisation. The developed countries are engaged in reforming their pension systems at present. Some of the features of these reforms have been:

- To privatise their pension systems and to replace PAYGPPs with privately managed DCPPs.
- To involve private sector institutions in managing investments and in undertaking administrative functions relating to pensions.
- To emphasise regulation, capital market reform, business transparency and so on with a view to assign higher responsibility to provident and pension fund administrators.

10.12 PENSION SYSTEM IN INDIA

As per the Population Census 2011, the elderly population accounted for around 8.6 percent of total population in 2011. With increase in per capita income, better quality of life and better medical services, life expectancy is gradually increasing and consequently both the share and size of elderly population is increasing over time. As per the report on ageing in twenty-first century, jointly brought out by United Nations Population Fund (UNFPA) and Help Age International in 2012, the number of elders who have attained 60 years of age will shoot up by 360 percent between 2000 and 2050. India had around 100 million elderly population upto 2012 and the number is expected to increase to 323 million, constituting 20 percent of the total population, by 2050.[3] The dependency ratio[4] has increased in India. The dependency ratio has two components, the young dependency ratio and the old dependency ratio. The old dependency ratio is defined as the number of persons in the age-group 60 or more per 100 persons in the age-group 15–59 years. It is an important indicator of the pressures that demographics pose for pension systems. It measures how many people there are of working age relative to the number of retirement age. The increasing dependency ratio brings more economic pressure on working population. As the ratio increases there may be an increased burden on the productive part of the population to maintain the means of livelihood of the economically dependent part of the population. This results in direct impacts on financial expenditures on things like social security, as well as many indirect consequences. The old age dependency ratio in India has increased from 12.2 percent in 1991 to 13.1 percent in 2001 and further to 14.2 percent in 2011.

Traditionally, pension policy in India has been based on the employment contracts/service conditions and financed through employer and employee participation. As a result, the coverage has been restricted to the

[3]PFRDA, Annual Report, 2013–14.

[4]Dependency ratio is defined as the number of persons in age group 0–14 years plus number of persons in age group 60 years or more as a proportion of 100 number of persons in age group of 15–59 years.

organized sector and a vast majority of the workforce in the unorganized sector has remained outside the formal channels of old age financial support. Considering both the sectors, Indian pension schemes have been classified as follows: (i) Civil Service Scheme, (ii) Employee Pension Scheme, (iii) Occupational Pension Scheme (OPS), and (iv) Indira Gandhi National Old Age Pension Scheme.

Civil Servants' Pension (CSP) Central and state government employees receive pension under these schemes. The pension payments under these schemes are defined benefits and are related to final salary drawn at the time of retirement. They are paid out of current revenues of respective central and state governments for employees who joined service before 2004.

Employee Pension Scheme (EPS) It is a part of Employees' Provident Funds and Miscellaneous Provisions Act, 1952. It compulsorily covers formal sector workers with monthly earnings of ₹15,000 or less at firms with 20 or more workers in defined industries. Out of 12 percent contribution made by the employer, 8.3 percent goes to EPS and the employee gets pension after the retirement.

Occupational Pension Schemes (OPS) The public sector enterprises have similar type of pension arrangements like civil servants. These systems are now changing and most of them have become contributory. Some private sector enterprises also provide pensions but the mode of payment of pensions varies from enterprise to enterprise. The enterprises sometimes manage the fund themselves and sometimes jointly with pension annuities providing companies such as the Life Insurance Corporation of India Ltd.

Indira Gandhi National Old Age Pension Scheme (IGNOAPS) It is a welfare programme being administered by the Ministry of Rural Development. This programme is being implemented in rural areas as well as urban areas with effect from 1995. This scheme focus towards providing social security to aged citizens, especially those belonging to the below poverty line (BPL) and also the families in the same category who have lost their primary breadwinner. Earlier known as National Old Age Pension Scheme was renamed in 2007. Under IGNOAPS, BPL persons aged 60 years or above are entitled to a monthly pension of 200 up to 79 years of age and ₹500 thereafter (earlier the age limit was 65 years). At present, central government provides ₹200 under IGNOAPS, to which the state government adds an additional amount, according to their discretion.

10.13 DEVELOPMENTS IN INDIAN PENSION SECTOR

In India, most of those who have worked in organized sector get pension and other retirement benefits after attaining the age of superannuation varying between 52 and 65 years. But for others, which constitutes majority, lack of such benefits results in abrupt break in the income cycles which acts as a major financial constraint for the entire household. For those in the lowest segments of the population, particularly in the unorganized sector, this absence of old age income security can easily push them back into the poverty trap. With a view to examine all aspects and issues associated with the existing pension system and with the objective to achieve a better balance in the pension regime by rationalizing the future pension liabilities of the state as also for improving the pension coverage, the government of India has set up an expert committee Old Age Social and Income Security (OASIS) under the chairmanship of Shri S. A. Dave in 1998 to devise a new pension system for India. The OASIS Report (2000), submitted by the committee recommended setting up a new pension system based on Individual Retirement Accounts (IRAs) which can be opened anywhere in India with modest contributions through the working career of the workers.

Further, a High Level Expert Group (HLEG) under the chairmanship of Shri B. K. Bhattacharya was constituted in 2001 to review the defined benefit pension system and to provide a roadmap for future steps. The HLEG recommended a two tier pension system. The first tier was a mandatory scheme that combined contributions from employees and the central government on matching basis and the second tier (optional), seeking to promote savings during one's service career. A working group under Shri N. Rangachary, Chairman, Insurance Regulatory and Development Authority (IRDA) submitted its report on pension reforms in an unorganized sector. The report suggested a pension scheme which would be voluntary in nature to be contributed by the members of the unorganised sector and capable of absorbing all others who want to participate as members of the scheme. An individual would save and accumulate assets through his entire working life. Upon retirement, the individual would be able to use his pension assets to buy annuities from annuity providers and obtain a monthly pension. After examining these reports, government decided to introduce a new defined contribution pension system for new entrants to central government service, except to armed forces, in the first stage, with effect from 1-1-2004, replacing the existing defined benefit system. This was a paradigm shift, from the existing defined returns philosophy to a defined contributions philosophy.

The major recommendations of OASIS committee are as follows:

- That 10 percent of the annual incremental funds should be allowed to be invested in equity.
- That the real rate of return on pension fund investments should increase from 2.7 percent in 1999 to 5.00 percent thereafter.
- That the setting up of private pension funds should be allowed.
- That a regulatory authority (pension authority) for pension funds needs to be set up.
- That 20 percent of the annual incremental pension funds should be permitted to be invested in private corporate debt.
- That the guidelines should be issued to pension funds to ensure superior returns and better risk management.
- That pension funds should be allowed to invest in secondary markets for various securities.
- That the present tax on the earnings of pension funds over 12 percent needs to be abolished so as to encourage them to earn higher rate of return on investments during the period of accumulation of funds.
- That fresh provident funds accretions and the earnings from investments of the existing funds should be managed by professional funds managers.
- That a favourable tax treatment be provided for contributions, funds and annuity payments.
- That pension fund managers should offer schemes of three categories: safe income, balanced income and growth.
- The OASIS has also suggested the creation of Individual Retirement Pension Accounts (IRPA), which will have the following features:
    1. Individuals would make voluntary contributions into individual retirement accounts throughout his/her work life. Contributions may be in small amounts.
    2. Post offices and bank branches will be the points-of-presence (POPs) to ensure easy access. All transactions of IRPA can be done through these POPs anywhere in India.
    3. IRPAs can be carried across job changes and different locations that is they will enjoy full portability.

4. Record keeping in respect of IRPAs will be centralised and there will be a central depository.
5. There would be a number of pension fund managers (six to begin with) who may bid for five years. (I) Central depository will transfer block of funds to pension funds managers.
6. Individuals can change fund managers if they are not satisfied with their performance.

10.14 NEW PENSION SYSTEM OR NATIONAL PENSION SYSTEM (NPS)

LO 4

Discuss New Pension System or National Pension System (NPS): Architecture, features, investments, and challenges

The Government of India introduced the New Pension System (NPS) from January 1, 2004 through a notification on 22-12-2003 for new entrants to central government service, except to armed forces. The new pension system is now popularly known as national pension system. The Pension Fund Regulatory Development Authority (PFRDA) is the regulator of this NPS. The detailed discussion on PFRDA has been carried out in Chapter 7. NPS is open to all the citizens of India since 1st May, 2009.

10.14.1 Architecture of NPS

The NPS architecture involves a set of intermediaries, called Points of Presence (PoP) and aggregators, which are authorized to open NPS accounts and receive contributions; the pension funds, which are registered with PFRDA and are authorized to manage the pension corpus of the subscribers; Trustee Bank which facilitates fund transfer between the POPs and aggregators at the front end and pension funds and annuity service providers at the back end and the Central Record keeping Agency (CRA), which maintains the record and is responsible for keeping the data of individual subscribers and also acts as an interface between the different intermediaries in the NPS system. The main functions and responsibilities of the CRA shall include: (i) Record keeping, administration and customer service functions for all subscribers of the NPS. (ii) Issue of unique Permanent Retirement Account Number (PRAN) to each subscriber, maintaining a database of all PRANs issued and recording transactions relating to each subscriber's PRAN. (iii) Acting as an operational interface between PFRDA and other NPS intermediaries such as pension funds, annuity service providers, trustee bank and so on.

The Pension Fund Regulatory Development Authority has already identified through a process of competitive bidding, National Securities Depository Limited (NSDL) to function as the CRA in respect of government employees. Similarly, three public sector entities namely, the Life Insurance Corporation of India, The State Bank of India and UTI Asset Management Company Private Limited have been identified as sponsors of pension funds.

The facilities like opening Permanent Retirement Account, contributing to NPS and so on are required to be provided to all the citizens at various locations across India. These processes are carried out through the entities known as Points of Presence (POPs) appointed by the PFRDA. Points of Presence' shall provide the services under NPS through its network of branches called POP Service Providers (POP-SP). Currently, there are 63 POPs registered with PFRDA. All these include most of the public sector and private sector banks and other private financial services companies. The POPs are responsible to provide various NPS services

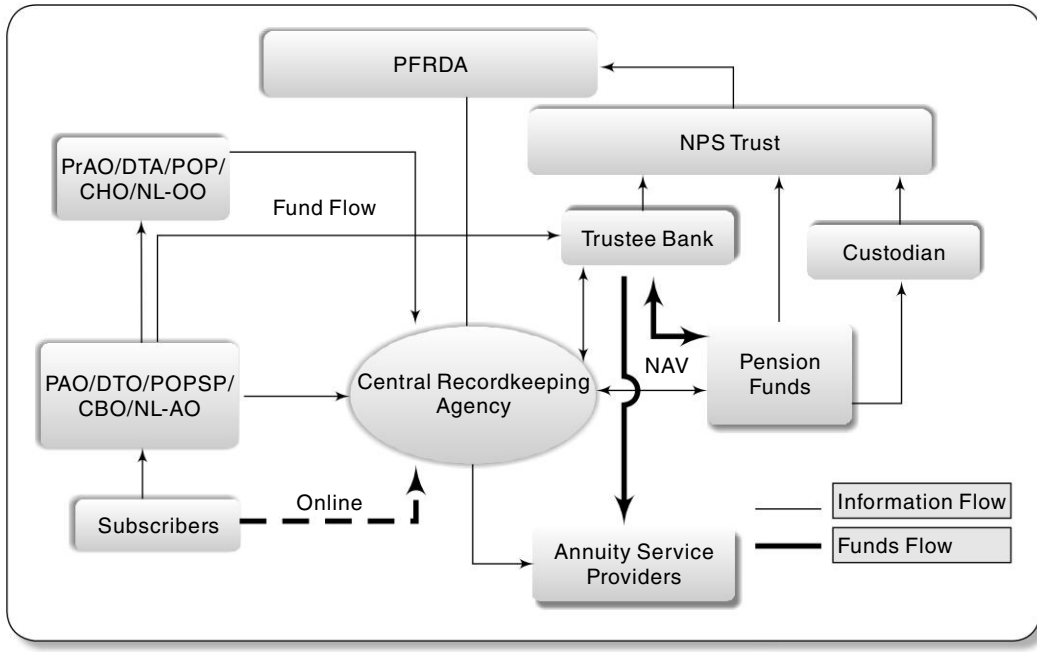


Figure 10.1 Architecture of NPS.

Source: PFRDA, Annual Report, 2013–2014.

to subscribers including (i) Subscriber registration, (ii) Regular subscriber's contribution, (iii) Change in subscriber details, (iv) Change of investment scheme/fund manager, (v) Processing of withdrawal request, (vi) Processing of request for subscriber shifting, (vii) Issuance of printed Account statement and so on Pension fund is an intermediary which has been granted a certificate of registration by the authority as a pension fund for receiving contributions, accumulating them and making payments to the subscriber in the manner as may be specified by the authority.

Custodian shall mean 'Custodian of Securities' who has been granted the letter of appointment by the authority for providing custodial and depository participant services for the pension schemes regulated by the authority. The custodian provides custodial services to the pension fund and ensure that benefits due on the holdings are received; provide detailed information and other reports as required by the NPS trust; maintain confidentiality of the transactions and are responsible for any loss or damage to the assets belonging to the pension funds due to the negligence on its part or on the part of its approved agents. The custodian is not permitted to assign, transfer, hypothecate, pledge, lend, use or otherwise dispose off any assets or property of the fund, except pursuant to instruction from the trustee. Stock Holding Corporation of India Ltd. (SCHIL) has been appointed by PFRDA to function as 'The Custodian and Depository Participant' to NPS trust and provide custodial services for securities in physical form and depository participant services for securities in demat mode.

10.14.2 Features of NPS

- The new pension system (NPS) would be based on defined contributions and represents a market linked retirement investment product.

- Individuals who are aged between 18 and 60 years as on the date of submission of his/her application can join NPS either as individuals or as an employee-employer group(s) (corporates) subject to submission of all required information and Know Your Customer (KYC) documentation. After attaining 60 years of age, you will not be permitted to make further contributions to the NPS accounts. An NRI can open an NPS account. Contributions made by NRI are subject to regulatory requirements as prescribed by RBI and FEMA from time to time.
- It will use the existing network of bank branches and post offices and so on to collect contributions.
- The new pension system will be voluntary. The system would, however, be mandatory for new recruits to the central government service (except the armed forces).
- The State Government can choose to join this new pension scheme.
- Investment in NPS is independent of your contribution to any provident fund.
- NPS account can be operated from anywhere in the country irrespective of individual employment and location/geography.
- NPS account can be opened through the Point of Presence (POP) which will assist the subscriber in opening the account including the filling up of necessary forms, providing the information about NPS and any other relevant information in this regard.
- NPS offers two types of accounts to its subscribers, namely tier I and tier II. While tier I account is mandatory for opening of an NPS account, opening of tier II account is optional and to be decided by the subscriber based on his or her requirements. However, an active tier I account is a pre-requisite for opening a tier II account.
- After opening the account, every individual subscriber is issued a Permanent Retirement Account Number (PRAN) card and has a 12 digit unique number. In case of the card being lost or stolen, the same can be re-printed with additional charges.
- A subscriber has to contribute a minimum annual contribution of ₹6,000 for his tier I account in a financial year and if not contributed the account will be frozen. In order to unfreeze the account, the customer has to pay the total of minimum contributions for the period of freeze, the minimum contribution for the year in which the account is reactivated and a penalty of ₹100. In order to unfreeze an account, the subscriber has to approach the Point of Presence (POP) and pay the required amount.
- The monthly contribution would be 10 percent of the salary and DA to be paid by the employee and matched by the central government or the employer.
- The contributions and returns thereon would be deposited in a non-withdrawable pension account.
- At present, there are eight Pension Fund Managers (PFM's) who manage the subscriber funds at the option of the subscriber. At present, subscriber has option to select any one of the following eight pension funds: (i) ICICI Prudential Pension Fund, (ii) LIC Pension Fund, (iii) Kotak Mahindra Pension Fund, (iv) Reliance Capital Pension Fund, (v) SBI Pension Fund, (vi) UTI Retirement Solutions Pension Fund, (vii) HDFC Pension Management Company (viii) DSP Blackrock Pension Fund Managers. Since registration of PFMs is an on-going process, this list will be updated from time to time.
- There is a default PFM provision under NPS and SBI Pension Funds Private Limited acts as the default pension fund manager.
- You may select different PFMs and investment options for your NPS tier I and tier II accounts.
- The NPS offers two approaches to invest subscriber's money: (i) Active choice—Here, the individual would decide on the asset classes in which the contributed funds are to be invested and their percentages

(asset class E (maximum of 50 percent), asset class C and asset class G), (ii) Auto choice: lifecycle fund—This is the default option under NPS and wherein the management of investment of funds is done automatically based on the age profile of the subscriber. At the lowest age of entry (18 years), the auto choice will entail investment of 50 percent of pension wealth in E class, 30 percent in C class and 20 percent in G class. These ratios of investment will remain fixed for all contributions until the participant reaches the age of 36. From age 36 onwards, the weight in E and C class will decrease annually and the weight in G class will increase till it reaches 10 percent in E, 10 Percent in C and 80 percent in G. All the asset classes are explained in the next section of this chapter.

- There will be seamless transfer of accumulations in case of change of employment and/or location. Subscribers can shift from one sector to another like private to government or *vice versa*. Hence a private citizen can move to central government, state government and so on with the same account. Also, subscriber can shift within sector like from one POP to another POP and from one POP-SP to another POP-SP. Likewise an employee who leaves the employment to become a self-employed can continue with his individual contributions. If he enters re-employment, he may continue to contribute and his employer may also contribute and so on.
- The subscriber can contribute to NPS from any of the POP/POP-SP despite not being registered with them and from anywhere in India.
- You can appoint up to three nominees for your NPS tier-I and NPS tier-II account. In such a case, you are required to specify the percentage of your savings that you wish to allocate to each nominee. The shared percentage across all nominees should collectively aggregate to 100 percent.
- Individuals who are employed and contributing to NPS would enjoy tax benefits on their own contributions as well as their employer's contribution as under: (a) Employee's own contribution—Eligible for tax deduction up to 10 percent of salary (Basic + DA) under Section 80 CCD(1) within the overall ceiling of ₹1 lakh under Sec 80 CCE. (b) Employer's contribution—The employee is eligible for tax deduction up to 10 percent of salary (Basic + DA) contributed by employer under Sec 80 CCC(2) over and above the limit of ₹1 lakh provided under Sec 80 CCE.
- Self-employed people are eligible for tax deduction up to 10 percent of gross income under Sec 80 CCD (1) with in the overall ceiling of ₹1 lac under Sec 80 CCE.
- Individuals can exit from the scheme at the age of 60 years but they would have to invest mandatorily 40 percent of the pension wealth to purchase an annuity from the IRDA regulated life insurer.
- Indian life insurance companies which are licensed by Insurance Regulatory and Development Authority (IRDA) are empanelled by PFRDA to act as annuity service provider to provide annuity services to the subscribers of NPS. Currently, the following are the ASPs empanelled by PFRDA. (1). Life Insurance Corporation of India (2). SBI Life Insurance Co. Ltd. (3). ICICI Prudential Life Insurance Co. Ltd. (4). Bajaj Allianz Life Insurance Co. Ltd. (5). Star Union Dai-ichi Life Insurance Co. Ltd. (6). Reliance Life Insurance Co. Ltd. (7). HDFC Standard Life Insurance Co. Ltd
- If somebody decides to retire or does not want to continue in the NPS before age 60 then at least 80 percent of the accumulated pension wealth of the subscriber needs to be utilized for purchase of an annuity providing for the monthly pension of the subscriber and the balance is paid as a lump sum payment to the subscriber.
- In the unfortunate event of death of the subscriber, the entire accumulated pension wealth (100 percent) would be paid to the nominee/legal heir of the subscriber and there would not be any purchase of annuity/ monthly pension.

10.15 INVESTMENT OF NPS FUNDS

NPS will also provide various investment options and choices to individuals to switch over from one investment option to another or from one fund manager to another subject, of course, to certain regulatory restrictions. For managing the contributions of government employees, three Pension Funds (PFs) were registered with PFRDA which are: (i) LIC Pension Fund Ltd., (ii) SBI Pension Funds Private Ltd., and (iii) UTI Retirement Solutions Ltd. The investment management fee charged by PFs is 0.0102 percent per annum. For managing the contributions of non-government employees, eight Pension Funds (PFs) were registered with PFRDA under PFRDA (Registration of Pension Funds for Private Sector) Guidelines, 2012. All these PFs are (i) SBI Pension Funds Pvt. Ltd., (ii) UTI Retirement Solutions Ltd., (iii) LIC Pension Fund Ltd., (iv) Kotak Mahindra Pension Fund Ltd., (v) Reliance Capital Pension Fund Ltd., (vi) ICICI Prudential Pension Funds Management Co. Ltd., (vii) HDFC Pension Management Co. Ltd., and (viii) DSP Black Rock Pension Fund Managers Pvt. Ltd. The investment management fee charged by the PFs is with the upper ceiling of 0.25 percent per annum.

There are different schemes under which the investments are made in NPS. All these schemes are classified as follows:

(A) Government schemes: (i) CG Scheme (ii) SG Scheme

(B) Private sector schemes: (i) Scheme E (tier I and tier II), (ii) Scheme C (tier I and tier II), (iii) Scheme G (tier I and tier II) (iv) NPS lite.

Tables 10.8 and 10.9 show the investment guidelines for the government sector and private sector NPS schemes for both tier-I and tier-II accounts. It is evident from the tables, the investments in the government securities and debt securities constitute around 90 percent of the total investments.

Table 10.8 Investment guidelines for government sector NPS schemes (Applicable to government sector and NPS lite schemes of NPS)

S. No.	*Category*	*Investment guidelines*
(i)	Government securities (upto 55 percent)	(a) Government securities. (b) Other securities guaranteed by the central government or any state government except those covered under (ii) (a) below. (c) units of mutual funds set up as dedicated funds for investment in government securities, not be more than 5 percent of the total portfolio of G Secs in the concerned NPS Scheme at any point of time.
(ii)	Debt securities (upto 40 percent)	(a) Debt securities having a minimum residual maturity period of three years. (b) Term deposit receipts of not less than one year duration issued by scheduled commercial banks. (c) Rupee bonds having an outstanding maturity of at least 3 years issued by institutions of the International Bank for Reconstruction and Development, International Finance Corporation and the Asian Development Bank, Rated IDFs, Rated ABS (Asset Backed Securities). (d) Debt Mutual Funds as regulated by SEBI.
(iii)	Money market instrument (upto 5 percent)	Money market instruments including units of money market mutual funds
(iv)	Equity (upto 15 percent)	Shares of companies on which derivatives are available in BSE or NSE or equity linked schemes of mutual funds or ETFs regulated by the SEBI.

Source: PFRDA, Annual Report 2013–2014.

Table 10.9 Investment Guidelines for Private Sector NPS {applicable to E (tier I and II), C (tier I and II), and G (tier I and II)}

Assets class	*Investment guidelines*
E	Index Funds/Exchange traded funds that replicate the portfolio of either BSE Sensex index or NSE Nifty 50 index.
C	(i) Fixed deposits of scheduled commercial banks (ii) Credit rated debt securities with residual maturity of not less than 3 years issued by bodies corporate including scheduled commercial banks and public financial institutions having an investment grade rating from at least one rating agency. (iii) Credit Rated Public Financial Institutions/PSU Bonds (iv) Rated asset backed securities/Credit Rated Municipal Bonds/Infrastructure Bonds/ Rated Infrastructure Debt Funds (v) Debt Mutual Funds as regulated by SEBI.
G	(i) Government of India bonds
E/C/G	Pending deployment as per investment objective, funds may be invested in short-term deposits of scheduled commercial banks or in call deposits or in short-term money market instruments or other liquid instruments or liquid funds of AMCs regulated by SEBI upto a limit of 10 percent of scheme AUM on a temporary basis.

Source: PFRDA, Annual Report 2013–2014.

10.16 CHALLENGES TO NPS

This system needs to be tackled effectively to spread wide enough to cover the unorganised sector, agriculture workers, temporary and casual workers and self-employed persons. The level of financial literacy and preponderance of rural aged make the task daunting. Designing an effective, efficient and accessible system, which caters to the requirement of a heterogeneous work force, nearly 88 percent of which is not covered by any pension or old age security scheme, is the immediate priority of those concerned with pension reform process in India. The new pension scheme is an attempt to move away from the defined benefit pension plans to defined contribution based schemes. But, this change would be applicable only to the new entrants. The problem of financing the pension liability of those already under unfunded or partially funded schemes is like to cause fiscal stress for the next two or three decades. Some parametric changes will, therefore, become necessary for effective and efficient discharge of this liability. Thus, apart from spread of the new pension scheme, introduction of parametric changes in the existing defined benefit mandatory pension systems is equally necessary for reducing the fiscal stress. Attempts to estimate the future pension liability arising out of the existing unfunded pension plans are at a nascent stage in India.

Empirical evidence collected through a survey conducted by the Asian Development Bank suggests that India is in transition from old age support systems, based on the family, to a new reality, where for the generation of workers now aged 40. The balance between family support and self-support in retirement is likely to fall heavily in the latter direction. It is, therefore, essential that policymakers correctly anticipate the course of the transition so that adequate counter measures are in place at the appropriate time. ADB data also indicates that without guidance, encouragement and support from most Indian workers will not save sufficiently for their old age and the capacity of the state and the labour market to face the challenges is likely to become even more limited than is the case now. Recognising the fact that pension reforms are an urgent social priority, policymakers in India are working hard to evolve pension systems, which are not only capable of meeting the present challenges but are able to adapt and re-structure overtime to meet unforeseen developments in future.

A major challenge of the New Pension System is to provide the individual subscriber with an adequate retirement income. Public sector pension schemes involve 'policy risk' in which the government of the day may not be able to accommodate required pension outlays leading to delays in pension payments or defaults in some cases. On the other hand, private pension schemes are less subject to this 'policy risk' because governments are less prone to confiscate private property but DC funds do involve capital-market risk during the accumulations phase when contributions and returns on investment buildup in the fund. The risk is that the pension funds' performance may be insufficient to give reasonable retirement income to the pension subscribers. The draft regulation has addressed this issue by providing prudential investment rules and ensuring that pension fund managers diversify their portfolios. Also, these regulations aim to promote competition by requiring standardised reporting and disclosure.

Traditionally, coverage in India has been obtained by mandating participation and contributions coupled with tax incentives and guaranteed returns on retirement savings. The voluntary nature of the proposed NPS along-with poor financial literacy and the attitude of the households towards financial savings, risk and retirement planning, also pose a challenge to achieving optimum coverage of NPS. Creating awareness about these reforms and gaining the confidence of the people to encourage them to be a part of this movement is the single most important challenge faced by policymakers today. At present, NPS is subject to the EET (exempt-exempt-taxed) tax regime. 'The EET method eliminates/reduces the bias inherent against savings under the income tax'. On the other hand, EPF, GPF and PPF have a more favourable tax treatment. EEE benefit is available to them. This goes against the basic philosophy of encouraging long-term contractual savings, which provide long-term funds for investment.

10.17 FEATURES OF NPS-SWAVALAMBAN[5]

- NPS-Swavalamban is a model specifically designed to bring NPS within easy reach of the economically disadvantaged sections of the society.
- This scheme was launched in September 2010 to encourage people from unorganized sector who join the NPS.
- Under the scheme, government will contribute ₹1000 per year to each NPS account opened in the year 2010–2011 and for the next 3 years, that is, 2011–2012, 2012–2013 and 2013–2014. The government's contribution will be available upto 2016–2017.
- The benefit will be available only to persons who join the NPS with a minimum contribution of ₹1000 and maximum contribution of ₹12,000 per annum.
- The scheme is for those citizens of India who are not part of any statutory pension or provident fund scheme. The target beneficiaries of *swavalamban* scheme are co-contributory scheme beneficiaries of state governments, *anganwadi* workers, construction workers, weavers, fishermen, farmers, dairy workers and so on.
- The scheme is managed by PFRDA and financed through budgetary support by way of Grants-in-Aid to PFRDA. The scheme operates through 71 POPs.
- The exit from the *swavalamban* scheme would be on the same terms and conditions on which exit from tier-I account of NPS is permitted, that is exit at age 60 with 40 percent minimum annuitisation of pension wealth and exit before age 60 with 80 percent minimum annuitisation of pension wealth.

[5]http://financialservices.gov.in/pensionreforms/swavalambanscheme.asp

However, the exit would be subject to the overriding condition that the amount of pension wealth to be annuitised should be sufficient to yield a minimum amount of ₹1000 per month. If the annuitised pension wealth does not yield an amount of ₹1000 per month, the percentage of pension wealth to be annuitised would be increased so that the pension amount becomes ₹1000 per month, failing which the entire pension wealth would be subject to annuitisation. This minimum pension ceiling may be revised from time to time.

10.18 FEATURES OF ATAL PENSION YOJANA[6]

- The Government of India has introduced a pension scheme called the Atal Pension Yojana (APY), with effect from 1-6-2015, pursuant to the announcement in the budget for 2015–2016 on creating a universal social security system for all Indians, especially the poor, the under-privileged and the workers in the unorganised sector.
- APY is being administered by the Pension Fund Regulatory and Development Authority (PFRDA) under the overall administrative and institutional architecture of the National Pension System (NPS).
- APY is open to all citizens of India who have a savings bank account. The minimum age of joining APY is 18 years and maximum age is 40 years.
- The central government would co-contribute 50 percent of the total contribution or ₹1000 per annum, whichever is lower, to each eligible subscriber, for a period of 5 years, that is from financial year 2015–2016 to 2019–2020, who join the APY before 31-12-2015, and who are neither the members of any statutory social security scheme and nor the income tax payers.
- Under the APY, the subscribers would receive the fixed minimum pension of ₹1000, 2000, 3000, 4000, and 5000 per month, at the age of 60 years, depending on their contributions, which itself would be based on the age of joining the APY. Therefore, the benefit of minimum pension would be guaranteed by the government. However, if higher investment returns are received on the contributions of subscribers of APY, higher pension would be paid to the subscribers.
- A subscriber joining the scheme of ₹1000 monthly pension at the age of 18 years would be required to contribute ₹42 per month. However, if he joins at age 40, he has to contribute ₹291 per month. Similarly, a subscriber joining the scheme of ₹5000 monthly pension at the age of 18 years would be required to contribute ₹210 per month. However, if he joins at age 40, he has to contribute ₹1454 per month.
- APY applications may be submitted to any of the following enrolment agencies: (i) All banks, including all nationalised banks, private banks, banking companies, regional rural banks, co-operative banks and so on either directly or through the following enablers: (a) All points of presence (service providers) and aggregators, which are governed under the institutional architecture of NPS and are appointed as such by PFRDA, could work as facilitators with banks. (b) Those Business Correspondents (BCs)/existing non-banking aggregators, Micro Finance Institutions (MFIs) and so on are appointed as enablers by banks. (ii) Other enrolment agencies that may be specified as such by PFRDA or the central government, such asDepartment of Posts under CBS Platform.
- The existing subscribers of Swavalamban in the age group of 18–40 years shall be migrated to APY unless they exercise an option to opt-out. The remaining subscribers outside this age group would be

[6]Ministry of Finance, Department of Financial Services, Notification, 16th October, 2015, New Delhi.

governed by the Pension Fund Regulatory and Development Authority (exits and withdrawals under the National Pension System) Regulations, 2015.

- The amount collected under APY shall be invested as per the investment pattern specified by the central government from time to time.
- On completion of 60 years, the subscriber will get the guaranteed minimum monthly pension, or higher monthly pension, depending on the investment returns. In exceptional circumstances, that is in the event of the death of beneficiary or specified illnesses, as mentioned in the Pension Fund Regulatory and Development Authority (Exits and Withdrawals under the National Pension System) Regulations, 2015, before the age of 60 years, the accumulated pension wealth till date would be given to the nominee or the subscriber, as the case may be. In case a subscriber, who has availed government co-contribution under APY, chooses to voluntarily exit APY before the age 60, he shall only be refunded the contributions made by him to APY, along with the net actual interest earned on his contributions (after deducting the account maintenance charges), whereas, the government co-contribution and the interest earned on the government co-contribution shall not be returned to such subscribers.

10.19 GROWTH OF NPS

The assets under management in various schemes have increased in absolute terms throughout the period. The share of government sector largely dominates the private sector. But, the trend shows that the share of private sector is gradually increasing throughout the period (Table 10.10). Across the subscribers also, the share of central government employees has been highest followed by the state government. The share of the private sector is very low (Table 10.11).

Table 10.10 Asset Under Management (AUM) break up in NPS growth (scheme wise position)

Schemes	*2010–2011*		*2011–2012*		*2012–2013*		*2013–2014*		*2014–2015*		*2015–2016*	
	Actual (₹ Cr)	*Share to total*	*Actual (₹ Cr)*	*Share to total*	*Actual (₹ Cr)*	*Share to Total*	*Actual (₹ Cr)*	*Share to total*	*Actual (₹ Cr)*	*Share to Total*	*Actual (₹ Cr)*	*Share to total*
Equity	31.30	0.36	71.00	0.47	181.80	0.61	382.10	0.79	698.04	0.86	1241.89	1.05
Bond	22.80	0.27	56.10	0.37	144.80	0.49	270.80	0.56	506.24	0.63	942.88	0.80
G-sec	32.60	0.38	84.60	0.56	257.60	0.86	429.60	0.89	806.97	1.00	1379.13	1.17
NPS-life	3.10	0.04	140.50	0.93	436.10	1.46	843.80	1.75	1605.72	1.99	2107.55	1.78
Corporate CG	0.00	0.00	0.00	0.00	693.40	2.32	1809.90	3.76	4105.12	5.08	6805.05	5.75
Total private sector	89.80	1.05	352.20	2.32	1713.70	5.74	3736.20	7.76	7722.09	9.55	12476.50	10.55
Central govt.	7266.40	84.64	11256.00	74.23	17313.00	58.00	24188.20	50.25	36736.77	45.44	48134.78	40.69
State govt.	1228.50	14.31	3555.10	23.45	10823.40	36.26	20211.40	41.99	36396.26	45.01	57692.50	48.77
Total govt.	8494.90	98.95	14811.10	97.68	28136.40	94.26	44399.60	92.24	73133.03	90.45	105827.28	89.45
Grand total	8584.70	100.00	15163.30	100.00	29850.10	100.00	48135.80	100.00	80855.12	100.00	118303.78	100.00

Source: NPS Trust, Annual Reports, Various Issues.

Table 10.11 Asset Under Management (AUM) break up in NPS growth (subscriber class wise position)

Subscriber class	*2013–2014*		*2014–2015*		*2015–2016*	
	Actual (₹ Cr)	*Percent*	*Actual (₹ Cr)*	*Percent*	*Actual (₹ Cr)*	*Percent*
NPS main	365.30	0.76	594.00	0.73	1272.88	1.07
NPS corporate	2627.60	5.46	5674.80	7.02	9290.05	7.82
NPS lite	839.30	1.74	1605.70	1.99	2107.55	1.77
Total private	**3832.20**	**7.97**	**7874.50**	**9.74**	**13176.80**	**11.09**
Central gov.	24177.10	50.26	36736.80	45.44	48135.03	40.51
State govt.	20095.30	41.77	36243.90	44.83	57498.27	48.40
Total govt.	44272.30	92.03	72980.70	90.26	105633.30	88.91
Grand total	**48104.55**	**100.00**	**80855.14**	**100.00**	**118810.12**	**100.00**

Source: NPS Trust, Annual Reports, Various Issues.

Table 10.12 Performance of pension fund managers

PFM	*AUM (in ₹ Mn)*			
	31-Mar-15	*31-Mar-16*	*Increase in AUM*	
			Amount	*Percent*
SBI Pension Fund Pvt. Ltd.	314071	460188	146,117	46.52
UTI Retirement Solution Ltd.	248314	359182	110,868	44.65
LIC Pension Fund Ltd.	240101	355119	115,017	47.9
ICICI Prudential Pension Funds Management Company Ltd.	3690	7011	3321	90.01
Kotak Mahindra Pension Fund Ltd.	1075	1727	652	60.68
Reliance Capital Pension Fund Ltd.	770	1112	343	44.5
HDFC	531	3762	3231	608.82
Total	**808552**	**1188102**	**379550**	**46.94**

Source: NPS Trust, Annual Reports, Various Issues.

Table 10.13 Funds of Central Government and State Government employees performance: scheme CG

	Financial year return (%)						*Trailing Return (%)*			
Scheme	*2010–2011*	*2011–2012*	*2012–2013*	*2013–2014*	*2014–2015*	*2015–2016*	*1-Yr*	*2-Yr*	*3-Yr*	*Since inception*
Central government										
LIC	8.30	5.80	12.06	5.93	18.96	5.99	5.99	12.23	10.11	9.83
SBI	8.05	5.81	12.75	3.92	19.38	6.47	6.47	12.74	9.70	10.2

(*Contd.*)

UTI	8.45	5.52	12.26	5.04	18.58	6.24	6.24	12.21	9.76	9.70
State government										
LIC	10.77	6.68	12.75	5.87	19.43	5.97	5.97	12.44	10.22	9.88
SBI	9.88	6.80	13.01	3.83	19.80	6.62	6.62	13.02	9.85	9.69
UTI	11.34	6.04	13.22	4.70	18.82	6.30	6.30	12.36	9.74	9.71

Source: NPS Trust, Annual Reports, Various Issues.

Table 10.14 Funds of Unorganized/Private Sector Performance: Scheme E, C and G—tier I and II

(*Percentage*)

	SCHEME E—TIER I										
Year	*ICICI*	*Kotak*	*Reliance*	*SBI*	*UTI*	*DSP*	*HDFC*	*LIC*	*IDFC*	*SENSEX*	*CNX Nifty*
2010–2011	11.83	11.89	10.77	8.05	8.35	—	—	—	8.89	10.94	11.14
2011–2012	–7.75	–10.23	–10.49	–7.18	–10.58	—	—	—	–9.32	–10.5	–9.23
2012–2013	9.05	11.52	7.75	8.24	7.42	—	—	—	—	8.23	7.31
2013–2014	21.18	19.48	20.2	20.68	21.29	—	—	—	—	18.6	17.83
2014–2015	28.65	28.41	28.3	28.37	29.74	—	28.63	27.51	—	24.92	26.56
2015–2016	–7.37	–6.88	–7.26	–7.16	–6.72	—	–7.47	–7.91	—	–9.33	–8.84
	SCHEME E—TIER II										
Year	*ICICI*	*Kotak*	*Reliance*	*SBI*	*UTI*	*DSP*	*HDFC*	*LIC*	*IDFC*	*SENSEX*	*CNX Nifty*
2010–2011	10.12	11.66	5.37	7.86	10.16	—	—	—	7.05	10.94	11.14
2011–2012	–10.41	–9.8	–10.37	–7.51	–10.74	—	—	—	–9.46	–10.5	–9.23
2012–2013	9.79	11.33	7.79	8.26	7.63	—	—	—	—	8.23	7.31
2013–2014	21.14	19.50	20.67	20.37	20.51	—	—	—	—	18.6	17.83
2014–2015	28.66	28.12	28.25	28.64	31.04	—	22.77	21.46	—	24.92	26.56
2015–2016	–7.39	—6.67	—7.22	–7.13	–6.54	—	–7.17	–7.29	—	–9.33	–8.84
	SCHEME C—TIER I										
Year	*ICICI*	*Kotak*	*Reliance*	*SBI*	*UTI*	*DSP*	*HDFC*	*LIC*	*IDFC*	*SENSEX*	*CNX Nifty*
2010–2011	9.41	10.86	8.12	12.66	9.2	—	—	—	6.26	10.94	11.14
2011–2012	11.43	10.19	8.13	11.07	10.19	—	—	—	9.15	–10.5	–9.23
2012–2013	14.22	15.01	13.89	14.27	13.41	—	—	—	—	8.23	7.31
2013–2014	6.22	5.77	6.89	5.24	6.14	—	—	—	—	18.60	17.83
2014–2015	15.72	15.22	15.04	15.7	15.09	—	15.2	15.43	—	24.92	26.56
2015–2016	9.77	9.46	9.12	8.72	8.83	—	9.20	9.46	—	-9.33	-8.84
	SCHEME C—TIER II										
Year	*ICICI*	*Kotak*	*Reliance*	*SBI*	*UTI*	*DSP*	*HDFC*	*LIC*	*IDFC*	*SENSEX*	*CNX Nifty*
2010–2011	10.74	7.2	7.28	14.46	7.62	—	—	—	6.02	10.94	11.14
2011–2012	12.27	9.7	7.86	10.73	11.4	—	—	—	10.02	–10.5	–9.23
2012–2013	13.6	13.15	12	12.69	12.95	—	—	—	—	8.23	7.31

(*Contd.*)

2013–2014	6.10	5.76	6.04	4.15	5.75	—	—	—	—	18.6	17.83
2014–2015	15.91	15.19	14.97	15.62	15.3	—	9.51	12.37	—	24.92	26.56
2015–2016	9.46	8.61	8.80	8.60	8.57	—	8.94	8.26	—	-9.33	-8.84
	SCHEME G—TIER I										
	ICICI	*Kotak*	*Reliance*	*SBI*	*UTI*	*DSP*	*HDFC*	*LIC*	*IDFC*	*SENSEX*	*CNX Nifty*
2010–2011	7.71	9.14	7.65	12.25	12.52	—	—	—	6.97	10.94	11.14
2011–2012	6.07	6.14	5.63	5.46	3.75	—	—	—	5.90	–10.5	–9.23
2012–2013	13.84	13.61	13.74	13.48	13.57	—	—	—	—	8.23	7.31
2013–2014	1.51	0.84	0.89	0.23	0.93	—	—	—	—	18.60	17.83
2014–2015	20.75	19.63	20.24	20.73	20.18	—	19.88	20.93	—	24.92	26.56
2015–2016	6.97	7.54	7.22	7.16	7.16	—	6.77	6.50	—	–9.33	–8.84
	SCHEME G—TIER II										
	ICICI	*Kotak*	*Reliance*	*SBI*	*UTI*	*DSP*	*HDFC*	*LIC*	*IDFC*	*SENSEX*	*CNX nifty*
2010–2011	6.43	6.40	4.68	11.82	16.44	—	—	—	6.00	10.94	11.14
2011–2012	6.36	5.37	5.76	5.31	3.81	—	—	—	7.22	–10.5	–9.23
2012–2013	14.36	12.86	13.68	13.47	13.52	—	—	—	—	8.23	7.31
2013–2014	1.12	1.18	0.87	0.39	0.51	—	—	—	—	18.60	17.83
2014–2015	20.70	19.90	20.44	20.57	20.27	—	19.45	19.94	—	24.92	26.56
2015–16	7.05	7.66	7.37	7.28	7.28	—	6.83	6.75	—	–9.33	–8.84

Source: NPS Trust, Annual Reports, Various Issues.

Table 10.15 Performance of scheme NPS lite

	Financial year return (%)					*Trailing Return (%)*			
Scheme	*2011–2012*	*2012–2013*	*2013–2014*	*2014–2015*	*2015–2016*	*1-Yr*	*2-Yr*	*3-Yr*	*Since inception*
Kotak	—	14.58	5.18	19.23	6.37	6.37	12.57	10.06	10.85
LIC	10.1	13.02	5.91	19.52	5.72	5.72	12.33	10.18	10.57
SBI	8.70	13.83	4.11	19.52	6.30	6.30	12.72	9.75	10.83
UTI	8.55	13.18	4.90	19.20	5.83	5.83	12.28	9.76	10.61

Source: NPS Trust, Annual Reports, Various Issues.

All the PFMs continued to witness good growth in assets under management. All the PFMs maintained their relative ranking in terms of size of AUM with SBI PF having the largest corpus. HDFC Pension Management Company Limited registered the highest growth in AUM in percentage terms (Table 10.12). The year wise return from different pension schemes has been highly fluctuating across the years (Tables 10.13, 10.14 and 10.15). In comparison with the stock index returns and mutual fund performance in the year 2014–2015, all the schemes have underperformed against other market wide indexes. In the year 2015–2016, all PFMs in scheme CG, scheme SG, scheme NPS lite and scheme corporate CG have outperformed the CRISIL—AMFI MIP Fund Performance Index for one-year and two-year periods, while under performed for three-year period. The equity schemes (Scheme E—tier I and Scheme E—tier II) of all PFMs have under performed

CRISIL - AMFI Large Cap Fund Performance Index in two-and three-year period. Corporate debt schemes (Scheme C—tier I and Scheme C—tier II) of all PFMs have delivered superior returns to CRISIL - AMFI Income Fund Performance Index in one-, two- and three-year periods. The Gilt schemes (Scheme G—tier I and Scheme G—tier II) of all PFMs have outperformed CRISIL - AMFI Gilt Fund Performance Index in one-, two-and three-year periods (NPS, Annual Report, 2015–2016).

SUMMARY

- Small savings organisations mobilise financial savings which are largest next to those of commercial banks. In the Indian milieu, their work is of great importance in qualitative terms also.
- Small savings are directly available to the central and state governments as a part of their budgetary resources and they constitute the non-marketable debt of the government.
- Small savings organisations are instrumental in draining resources from the rural to the urban areas.
- Small savings media has two components: post office deposits and savings certificates and bonds. These instruments represent medium-term and long-term investment opportunities, and are a good substitute for bank deposits, debentures, units and marketable government securities.
- The main small savings instruments inexistence at present are post office saving bank deposits, post office time deposits, post office recurring deposits, national savings certificates, post-office monthly income scheme account, senior citizen savings scheme KisanVikas Patras and Sukanya Samriddhi Accounts.
- Saving in PFs is a contractual obligation, and the main motive behind saving in this form is not to make profits or to seek capital growth.
- The popular operational provident fund accounts available in India are (i) General Provident Fund (GPF), (ii) Employees' Provident Fund Scheme (EPF), and (iii) Public Provident Fund (PPF).
- The rate of return on contributions to PFs has become quite attractive. The effective rate of return on PF is much higher because of the income-tax and wealth-tax benefits.
- The funds in the PF are mostly invested in the government securities, debt instruments and term deposits in the banks.
- For many years now, PFs have emerged as one of the most important financial assets in the Indian economy; its importance is excelled only by bank deposits and small savings.
- In pension funds, risk and return and non-liquidity are the dominant considerations. Similarly, the instrument-wise and area-wise diversification is the basic maxi of investment by the pension funds.
- The pension plans can be classified as: (a) Defined Benefits Pension Plan (DBPP), (b) Defined Contribution Pension Plan (DCPP) or Money Purchase Pension Plan (MPPP), (c) Pay-as-you-go Pension Plan (PAYGPP).
- Considering both the organized and unorganized sectors, Indian pension schemes have been classified as follows: (i) Civil Service Scheme, (ii) Employee Pension Scheme, (iii) Occupational Pension Scheme (OPS), and (iv) Indira Gandhi National Old Age Pension Scheme.
- The Government of India introduced the New Pension System (NPS) from 01-01-2004 and it is open to all the citizens of India since 1st May 2009.
- The NPS architecture involves a set of intermediaries, called Points of Presence (PoP) and aggregators; the pension funds; Trustee Bank and the Central Recordkeeping Agency (CRA).

- The new pension system (NPS) would be based on defined contributions and represents a market linked retirement investment product.
- Individuals who are aged between 18 and 60 years as on the date of submission of his/her application can join NPS.
- The new pension system will be voluntary. The system would, however, be mandatory for new recruits to the central government service (except the armed forces).
- NPS offers two types of accounts to its subscribers, namely, tier I and tier II. While tier I account is mandatory for opening of an NPS account, opening of tier II account is optional and to be decided by the subscriber based on his or her requirements. However, an active tier I account is a pre-requisite for opening a tier II account.
- There are different schemes under which the investments are made in NPS. All these schemes are classified as follows: (A) Government schemes: (i) CG Scheme, and (ii) SG Scheme (B) Private sector schemes: (i) Scheme E (tier I and tier II), (ii) Scheme C (tier I and tier II), (iii) Scheme G (tier I and tier II), and (iv) NPS lite.

KEY TERMS

Small Savings
Post office Saving Deposits
Post office Time Deposits
Post office Recurring Deposits
Post office Monthly Income Scheme
Kisan Vikas Patra
Sukanya Samridhi Account
Employee Provident Fund
General Provident Fund
Public Provident Fund
Contributory Provident Fund
New Pension System

QUESTIONS

1. Explain the importance of small savings in India and discuss the important characteristics of the small savings.
2. Analyse the trends in growth in the volume of small savings among different schemes in India.
3. How have the interest rates on small savings reacted to the changes in the other banking reforms during the period of liberalisation?
4. Discuss the various provident funds schemes in India and how all these schemes work.
5. Discuss the architecture and features of New Pension System in India.
6. What are the major challenges to the New Pension System?
7. Explain the trends in investments of pension funds in India.

Insurance Companies

11 CHAPTER

Learning Objectives

- **LO 1** Know insurance principles and types
- **LO 2** Recall the nature of life insurance policies and non-life insurance policies
- **LO 3** Understand risk management and its process in insurance company
- **LO 4** Explain Insurer Solvency and Risk-Based Capital
- **LO 5** Review insurance industry in India and the Policy Developments
- **LO 6** Growth of life insurance and non-life insurance

11.1 INTRODUCTION

The insurance industry has both economic and social purpose and relevance. It provides social security and promotes individual welfare. The insurance business in India has grown by many folds after the entry of private insurance companies in 2000–2001. Up to that time the sector was largely dominated by the Government. The insurance industry of India consists of 53 insurance companies of which 24 are in life insurance business and 29 are non-life insurers. Among the life insurers, Life Insurance Corporation (LIC) is the sole public sector company. Apart from that, among the non-life insurers there are six public sector insurers. In addition to these, there is sole national reinsurer, namely, General Insurance Corporation of India. Other stakeholders in Indian Insurance market include agents (individual and corporate), brokers, surveyors and third party administrators servicing health insurance claims. This chapter is devoted to describing the working of all types of insurance companies operating in India.

11.2 MEANING AND CONCEPTS

LO 1
Know insurance principles and types

Insurance is a form of financial risk management tool in which the insured transfers the risk of a potential financial loss to the insurance company (insurer), which mitigates it in exchange for a monetary compensation popularly known as *insurance premium*. The actual premium of insurance companies comprises

the pure premium and administrative as well as marketing cost. The *pure premium* is the present value of the expected cost of an insurance claim. Since there is a lag between payment of premiums and payment of claims, there is generation of investible funds known as *insurance reserves*. Insurance involves not only risk transfer but also pooling and risk reduction. Pooling is the sharing of total losses among a group. Pooling within a large group facilitates risk reduction, which is a decrease in the total amount of uncertainty present in a particular situation. Insurance allows individuals, business and other entities to protect themselves against significant potential losses. *Insurance policy* is the contract between the insured (policy holder) and the insurer (insurance company).

Sum assured is the amount that is promised by the insurance company in the case of a claim either by maturity or by loss to the insured subject matter. Surrender value is the amount that the insurer pays if the insured discontinues the policy to the insurer. *Life of the policy* is the time period wherein the insurance policy is in vogue. *Moral hazard* refers to the *mala fide* intensions of either of the parties of the contract in fulfilling their obligations with respect to their performance of the contract. For example, when the insured burns down the building to claim insurance, though the damage is caused by fire, the frequency and severity of the loss increase making it a moral hazard.

11.3 PRINCIPLES OF INSURANCE

11.3.1 Principle of Utmost Good Faith

Both insurer and insured should enter into the contract in good faith. The insured should voluntarily disclose all the facts related to the subject matter of the contract. The insurer should also provide all the details regarding the insurance contract. Any material facts that are not disclosed to the other party having a direct or indirect relationship to the contract will make it null and void. For example, a smoker took a health insurance policy and at the time of taking the policy, he did not disclose this fact. After that if he/she suffers from lung cancer, the insurance company may not pay anything as he/she did not reveal the true fact to the company.

11.3.2 Principle of Insurable Interest

All insurance contracts should have an insurable interest by the policy holder. Insured must have the insurable interest on the subject matter, that is, the policy holder should be able to establish a monetary relationship between him/her and the subject matter of the insurance. Any loss of subject matter should directly lead to monetary loss to the policy holder. For example, in the case of life insurance of a person the spouse and dependents should have insurable interest in the life of the person. In the case of general insurance like motor insurance, insured must be the owner both at the time of entering into the insurance contract and at the time of accident.

11.3.3 Principle of Indemnity

Indemnity refers to the assurance given by one to put the person who buys insurance, in the event of loss, in the same position that he/she occupied immediately before the happening of the event for which indemnity is sought for. According to the indemnity principle, the insured may not collect more money than the actual loss in the event of damage covered by an insured peril. This implies, that insured cannot make any profit from

the insurance contract. This principle serves to control moral hazard problem. This principle does not apply for the life insurance contracts.

11.3.4 Principle of Subrogation

This principle refers to the right of the insurer to stand in the place of insured after the settlement of a claim and it gives the insurer right to recover from an alternative source, which is involved in this case. In other words, under this principle one who has indemnified another's loss is entitled to recover from any liable third parties who are responsible. If X causes damage to Y's property then Y's insurance company will indemnify Y to the extent of its liability for Y's loss and then have the right to proceed against X for any amounts it has paid out under Y's policy.

11.3.5 Principle of Warranties

Warranties are the conditions that are written by the insured in the insurance contract that state the truth by affirming or denying the existence of a particular state of facts. For example, a bank may be insured on condition that a certain alarm system be installed and maintained. Warranties are classified as (i) express warranties, and (ii) implied warranties. Express warranties are stated in the contract and the implied warranties are not found in the contract but are assumed by parties to the contract. For example, a shipper purchases insurance under the implied condition that the ship is seaworthy, the voyage is legal, so on. A warranty also may be either promissory or affirmative. The promissory warranty describes the condition, fact or circumstances to which the insured agreed to be held during the life of the contract. An affirmative warranty is one that most exist only at the time the contract is first put into effect.

11.3.6 Principle of *Cause Proxima*

Cause proxima means nearest cause. Proximate cause refers to the immediate cause that resulted in the loss. For example, when there is a loss of property due to fire caused by a shot circuit, the proximate cause is short circuit. An insurer is liable for any loss proximately caused by a peril insured against. It is important to identify the proximate cause of the loss that occurred so that it can be known whether the insured can collect the policy amount or not.

11.3.7 Principle of Contribution

Under this principle, insured cannot make profit by making claim for some loss more than once. For example, if somebody has taken a property insurance from company A and company B, then in the case of any accident the insured can take the claim from one company only.

11.3.8 Principle of Loss Minimisation

This principle states that the insured must take all the necessary steps to minimise the loss to insured properties. For example, if the home is burnt by fire, he should have called the nearest fire station to minimise the loss.

11.4 TYPES OF INSURANCE

The insurance companies are financial intermediaries as they collect and invest large amounts of premiums. They offer protection to the investors, provide means for accumulating savings and channelise funds to the government and other sectors. They are contractual saving agencies that receive, mostly without fail, steady inflow of funds in the form of premiums or regular contributions to pension plans. They are also in a position to predict, relatively accurately, when what amounts of insurance or pension benefits have to be paid. Furthermore, their liabilities in most cases are long-term liabilities, for many life policies are held for 30 or 40 or 50 or even more years. As a result, the liquidity is not a problem for them, and their major activity is in the field of long-term investments. Since they offer life cover to the investors, the guaranteed rate of return specified in insurance policies is relatively low. Therefore, they do not need to seek high rates of return on their investments. As a combined result of all these factors, the investments of insurance companies have been largely in government bonds, mortgages, state and local (municipal) government claims and corporate bonds. Broadly, insurance is offered either as life insurance or general insurance.

Life insurance covers insurance of life and covers risks related to the death of a person for whom insurance is bought. The objectives of life insurance companies are as follows: (i) To spread life insurance and provide life insurance protection to the masses at reasonable cost. (ii) To mobilise people's savings through insurance-linked saving schemes. (iii) To invest the funds to serve the best interests of both the policyholders and the nation. (iv) To conduct business with maximum economy, remembering always that the money belongs to the policyholders. (v) To act as trustees of the policyholders and protect their individual and collective interests. (vi) To innovate and adapt to meet the changing life insurance needs of the community. (vii) To involve all the people working in the corporation to ensure efficient and courteous service to the insured public. (viii) To promote amongst all agents and employees of the Corporation a sense of pride and job satisfaction through dedicated service to achieve the corporate objective. Its vision is to become 'a trans-nationally competitive financial conglomerate of significance to societies and Pride of India'. Its mission is to 'explore and enhance the quality of life of people through financial security by providing products and services of assured attributes with competitive returns, and by rendering resources for economic development'.

General insurance encompasses all those kinds of insurance contracts that cover non-life subjects. Health insurance is also a part of general insurance. There are various sub-classifications of general insurance based on the peril against which the insurance is sought. These include motor insurance, marine insurance, property insurance, liability insurance, commercial or business insurance, housing loan insurance,[1] and so on. The distinction between life and general insurance business is that with regard to the former, the claim is fixed and certain, but in the case of the latter, the claim is uncertain, that is, the amount of claim is variable and it is ascertainable only sometime after the event.

11.5 NATURE OF LIFE INSURANCE POLICIES

LO 2

Recall the nature of life insurance policies and non-life insurance policies

Life insurance policies make a very flexible financial instrument. There are only a few basic types of such policies, *viz.* term insurance, whole life insurance, endowment policies, annuity contracts, individual insurance, group insurance, pension plans, children's plans and equity-linked plans. These policies are mostly specific to different income and age groups. The whole life policies

[1]A loan insurance plan covers the balance to be paid in the case of the loanee's death as per the loan schedule decided at the time of taking the policy.

charge a premium throughout one's life while endowment policies are taken for a fixed period. The latter provide life cover and also carry an adequate return. The former also cover life and are intended to be long-term investments, which cover risk rather than provide return. However, in order to serve different purposes, these basic types can be and have been combined in many ways to devise a large number of plans. Life policies of any type can be either 'with profits' or 'without profits'. In the latter case, the sum paid out on maturity or at death is the sum assured of the policy when it was taken out. In the former case, bonuses out of extra earnings from various investments are added to the assured sum periodically during its currency or occasionally paid out in cash. The premiums on 'with profits' policies are higher than those on 'without profits' policies as an allowance for the bonuses paid.

As a financial instrument, life policy is a claim to a future payment of either a lump sum or a stream of income. The value of a policy is the present value of a lump sum or a future stream of income less the value of future premiums. It is possible to withdraw from the obligation to contribute further premiums and of realising immediately the present value of the policy by (a) surrendering the policy for cash, (b) 'assigning' it in the open market, (c) raising loan with the policy as security and (d) converting it into a 'free' or 'paid-up' policy. The life assurance policies and pension funds are popular because they act as life cover or protection and medium of saving with the added benefits of profits sharing (in the case of 'with profits' policies) and many tax advantages. Life policies become, in many cases, vehicles for linking up such actions as house purchase, provision of school fees, purchase of unit trust units and avoidance of tax. In many cases now, the provision of life cover becomes a subordinate motive, while the other motives are more important even when taking up a life insurance policy.

The funds collected through the sale of life plans are invested in a variety of income-producing assets. The life fund is built up out of the excess of premiums and investment income over claims and expenses on revenue and capital accounts. The life fund is valued from time to time, the valuation being based on the method of discounting future income and expenditure back to the present. The rate of discount used is usually equal to the rate of interest which the fund's assets are expected to earn on an average, and allowance may be made for increase in interest rates, future bonuses (in the case of 'with profit' policies) while determining the discount rate. A life fund is in surplus if the valuation of fund is greater than the present value of future liabilities. This surplus is available partly for distribution to policyholders and partly for adding to reserves. Only 'with-profit' policies participate in the distribution of surplus. There are three basic methods of distributing surplus to policyholders: in the form of cash, as a reduction in premium and as an addition to the value of policy. If the surplus is distributed in the form of addition to the value of policy, it is known as reversionary bonus. The bonus may be declared as a simple reversionary bonus, calculated on the original sum assured, or a compound reversionary bonus, calculated on the original sum assured plus any bonuses already declared. The surplus can be of two types: (a) revenue surplus discussed above, that is an excess of future income over future outgoings, and (b) capital surplus that arises when the value of the fund is balanced by the values of the various assets of the life fund as recorded in the balance sheet.

11.6 NATURE OF NON-LIFE INSURANCE POLICIES

The non-life or general insurance policies are not financial claims in the way most life insurance policies are. The essence of general insurance is the collective pooling of risks arising from fortuitous occurrences. For insurance, to be worthwhile, the premium must be small in relation to the potential loss. The policies in

general branch rarely run for a period longer than 1 year, and with some types (e.g. holiday insurance) the period is even much shorter. There is no guarantee of renewal of policy on the same terms or on any terms. The short-term contracts do not create large funds of invested assets as in the case of life insurance. The general insurance companies do not collect savings, yet they do accumulate pools of funds from premium and investment income out of which they meet claims under their policies. Since their liabilities are normally short-term in nature and since claims against them are unpredictable, their assets are held in relatively liquid form. The payments to be made by general insurance companies tend to rise during inflation since the cost of repairs and replacements are greater. Thus, they have a greater need both for liquidity and higher return and their investment pattern has to take care of this need. The general insurance companies are also known as property and casualty or liability insurance companies and they specialise in insurance in areas such as fire, hail, automobile, ocean and inland marine, aviation, theft, loss, damage liability and so on.

11.7 RISK MANAGEMENT IN INSURANCE COMPANIES

LO 3

Understand risk management and its process in insurance company

Risk management in an insurance company plays a vital role in the area of measuring, assessing the risk and developing strategies to manage it. Strategies include transferring the risk to another party, avoiding risks reducing the negative effect of the risk and accepting some or all of the consequences of a particular risk. An insurer always makes an effort to know the business activities of the insured minutely. Traditional risk management practices, like purchasing insurance to cover losses, remain the foundation of any risk management function. But specialties like asset-liability management, cash flow testing, dynamic capital adequacy testing and capital models are all sophisticated approaches that may be used together to analyse and manage the company's total risk exposure in a holistic manner. Classifying risks from an insurer's perspective and developing a risk management framework can be beneficial and is a necessary first step. Three main areas of risk exposure, typical for life insurers are listed as: (i) financial risks that include capital management and asset liability management; (ii) operational risks that include human resources risks, business partner risks, data integrity risks and technology risks; and (iii) market place risks that include reputational risks, regulatory risk, tax risks and product strategy risks.

The objective of Asset-Liability Management (ALM) is to measure and manage the insurer's investment and liability risks to meet solvency, marketing and profitability targets. Appropriate and integrated pricing, investment and policy contract design and customer satisfaction strategies also need to be developed to meet ALM objectives. In terms of ALM risk exposures, asset risk involves the risk of loss in investments—whether bonds, stocks, real estate, and so on. A source of asset risk involves default rates from debt issuers larger than expectations in ALM and pricing models. Credit risk can also arise from defaults on accounts receivable from distributors, and so on.

Operational risk is defined by the Basel Committee as 'the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events'. This definition includes legal risk, but excludes strategic risk, reputation risk and systemic risk. The current definition is based on underlying causes of operational risk, which are broken down into four categories: people, processes, systems and external factors. The committee originally proposed the level of capital for operational risk to be 20 percent of the Minimum Regulatory Capital (MRC), but subsequently reduced it to 12 percent, based on industry feedback.

The committee has identified three methods of calculating operational risk capital in order of increasing sophistication and risk sensitivity.

There are three types of effects due to this category of risks, *viz.* announcement effect, contagion effect and competitive effect. Announcements of an operational loss event can affect the company's stock price in the following three ways. First, if the announcement is fully anticipated, there will be no change in the stock price. Second, if the announcement conveys negative and unexpected information, the stock price will be adversely affected. Third, if the announcement conveys positive and unexpected information, the stock price will go up. The last situation may be unusual, but it is possible. If there is substantial information leakage before the announcement day, the estimated loss amount will be incorporated into the stock price before the announcement. If the announcement confirms the operation loss event with a considerably smaller loss amount, this news will be considered positive and will lead to upward adjustment to the stock price. In an efficient capital market, the announcement of operational loss events is said to be informative if they lead to a change in investor's assessments of the companies' future loss distribution. Thus, under the first situation, the announcement is said to be non-informative. Under the latter two situations, the announcement is said to be informative.

A contagion effect usually refers to 'the spillover effects of stocks of one or more firms to others'. A number of event studies have documented the contagion effect around a variety of corporate events in many industries such as bankruptcy announcements and filings, dividend reduction announcements, open market repurchase announcements, earning restatement announcements and asset write-down announcements. Lang and Stulz (1992) made a significant contribution to the contagion literature by introducing the competitive effect. They point out that announcement for bankruptcy needs not only convey negative information. The announcement can potentially increase the value of rival companies by redistributing wealth from the announcing company. This is called the competitive effect. They find that depending on the industry-specific characteristics, both competitive and contagion intra-industry effects can occur. The competitive effect, which indicates that the competitors benefit at the expense of the announcing firm, and the contagion effect, which indicates that other firms also experience financial difficulties, offset each other. It is not clear which should dominate. They find that industries with similar cash flow characteristics exhibit the contagion effect and that the competitive effect dominates in highly concentrated industries.

11.8 RISK MANAGEMENT PROCESS IN INSURANCE COMPANY

The process of risk management from an insurance perspective follows a logical approach as below:

Risk identification It broadly involves an in-depth understanding of the industry, the areas/markets it serves, its activities, range of products, legal, social and economic environment in which it operates and other physical/natural hazards associated with the company's operations. The risk identification process involves identifying the risk factors and evaluating the potential loss that might take place.

Risk assessment Once risks have been identified, they must then be assessed as to their potential severity of loss and probability of occurrence or in other words risk quantification. The fundamental difficulty in risk assessment is determining the rate of occurrence 'loss frequency', since statistical information is not available on all kinds of past incidents. There are models to assess the 'loss severity'. Proper risk assessment would help the underwriter to apply judgment to the risk by securing material information and by determining if

actual conditions are better or worse than average, whether there are more or fewer hazards than average and management and control of the plant/equipment is better or worse than average.

Risk treatment Once risks have been identified and assessed, all techniques to manage the risk is called the Risk Treatment. Following are some of the risk treatment techniques being adopted by an insurer: risk avoidance is non-performance of an activity that could carry risk. A risk of potential damage to a control room in a petrochemical complex can be avoided by making the control room blast proof, potential damage by flood to a pharmaceutical warehouse could be avoided by shifting warehouse to a higher elevation. Risk retention involves acceptance of loss. All risks that are not avoided or not transferred are retained by default. This includes risks that are so large or catastrophic that they either cannot be insured against or the premiums would be infeasible. War is an example since most property and risks are not insured against war, so the loss attributed by war is retained by the insured. Risk transfer means causing another party to accept the risk, typically by contract or by hedging. Insurance is one type of risk transfer that uses contracts. Risk transfer takes place when the activity that creates the risk is transferred.

Risk reduction It is an important task of risk management which involves methods that reduce the severity of the loss. Examples include a sprinkler system designed to put out a fire to reduce the risk of loss by fire. This method may cause a greater loss by water damage and therefore may not be suitable. Therefore, there should be proper risk mitigation plan that describes how this particular risk can be handled, and consequences can be minimised if it becomes a liability.

Periodic review of the risk including management programs Risk is a relative measure and from insurer perspective it is important to map the risk consequence with probability in a risk coordinate system. High probability and high consequence is the worst possible case. The total risk value in this case is highest, because there is increased potential of events with large consequences. The best label for this direction of movement is out of business. Low consequence and high probability is a nuisance quadrant, because there needs to have failure frequency tolerance in place. Here, there is lowest threshold of a loss which is Normal Loss Expectancy. These need minor repairs, replacement and minimum business inconvenience. Below this level the insured assumes all expense. Above that amount the insurer starts to pay. Low consequence and low probability is the objective of risk-based continuous improvement. The total risk is reduced and they are most productive. From an assessment point of view, the companies or plants moving in this direction are least likely to experience large catastrophic accidents. High consequence and low probability, this region is important from the underwriter's perspective, particularly when costs are above the company's deductibles. The threshold, which is Probable Maximum Loss (PML), relates to the value of possible major accidents or failures requiring extensive repair or replacement cost. Insurer assumes risk exposures based on the estimates which is one of the prudent parts of risk management exercise. The cost imprecations are fundamental to insurance pricing. The insurer must collect sufficiently high premium to have enough money on hand so that when PML occurs, the insurer can be financially solvent.

11.9 INSURER SOLVENCY

LO 4

Explain Insurer Solvency and Risk-Based Capital

Prudence requires that, once a policy is sold, the insurer sets aside a sum as reserves against future liabilities towards the policyholders. In estimating this reserve, the insurer makes assumptions into the future for parameters such as mortality, morbidity, expense, interest rate, and so on. These assumptions are

based on the insurer's best estimate expectations, which are based on their own portfolio or industry or similar other experience. Sub-regulation (b) of Regulation 5 of IRDA Regulations (Assets, Liabilities and Solvency Margin of Insurers), 2000 specifies that the best estimate assumption shall be adjusted by an appropriate margin for adverse deviation (MAD), the level of MAD being dependent on the degree of confidence in the expected level. The purpose of MAD is to build a buffer for misestimation of the best estimate or adverse fluctuations around the best estimate. However, MAD does not cover for volatility and catastrophe risks. Regulators thus insist on insurers setting aside separate excess assets, known as required Solvency Margin, to protect the policyholders' financial interests should such situations arise. The solvency of an insurance company corresponds to its ability to pay claims. The solvency of insurance company or its financial strength depends chiefly on whether sufficient technical reserves have been set up for the obligations entered into and whether the company has adequate capital as security.

Solvency margin is the amount by which the assets of an insurer exceeds its liabilities and will form part of the insurer's shareholder's funds. The regulations stipulated the minimum solvency margin, which an insurer must maintain at all times. The International Association of Insurance Supervisors (IAIS) defined solvency as follows: 'An insurance company is solvent if it is able to fulfil its obligations under all contracts under all reasonably foreseeable circumstances' (IAIS 2002). The definition was later slightly changed to 'the ability of an insurer to meet its obligations (liabilities) under all contracts at any time' (IAIS, 2003a).

Separate solvency margin will be required for long-term and general insurance business of a composite company so that each business will stand on its own and not subsidise the other. For life insurance business, the minimum solvency will normally be related to the policy reserve as disclosed by an actuarial valuation of the liabilities. For general insurance business, it is related to the higher of a percentage of net premium or net claim. There will also be a certain minimum amount required to be maintained under statute in the solvency formula for each of the lines of business. The Solvency Margin also denotes the capital base, defined as the surplus of assets over liabilities. It is often called shareholders' funds [in the UK] or policyholders' surplus [in the USA].

11.9.1 Solvency I

The key principle upon which the solvency I directives are based is that every insurer must maintain an adequate applicable solvency margin in respect of its business at all times which is at least equal to the requirement set out in the applicable insurance directive. Failure to maintain the required solvency margin is likely to have significant repercussions for the insurer as it is likely to cast doubts over its financial security and its ability to meet its obligations to policyholders. Basic objectives of Solvency I are as follows:

- To update the thresholds contained in the initial version of the insurance directives to take account of indexation and to update amounts that have been devalued since the insurance directives were brought into force originally;
- To provide a mechanism to ensure that solvency limits are reviewed annually by reference to the European Index of Consumer Prices; and
- To empower regulators in Member States to intervene at a sufficiently early stage where doubts are raised about an insurer's solvency rather than waiting for a specific breach of the solvency limits to have occurred and to empower them to reduce the credit given to reinsurances in certain circumstances.

It should be noted that, in common with the insurance directives, the solvency I directives operate to set out minimum standards for solvency margins. The starting point for determining the actual solvency margin for both general insurer and life insurer is determining the value of its excess assets after deducting all of its liabilities, all valued in accordance with the applicable asset/liabilities valuation regulations. Excess assets generally comprise the paid-up share capital (including non-cumulative preference share capital) of the insurer and the accounting reserves (including the net amount of the retained profit and loss account brought forward) that do not correspond to its underwriting liabilities. Under the solvency I directives, the limits to which these reserves may be counted have been tightened. The amount allowed may be up to 50 percent of future profits but may not exceed 25 percent of the lower of (a) the available solvency margin, and (b) the required solvency margin.

For non-life companies, the insurance directives are amended by the Solvency I directives and provide that the required solvency margin is to be determined on the basis of one of two alternative calculations. The first is a premium calculation and is based on the value of the higher of the insurer's aggregate gross written premium and gross earned premium in respect of its entire general business for the financial year in question. The figure is then adjusted to take account of net reinsurance premiums received and items such as taxation. The required margin is 18 percent of this adjusted premium up to EUR 50 million and 16 percent thereafter. A further adjustment is then made to take account of reinsurance recoveries, which is achieved by multiplying the figure by net claims and dividing by gross claims, each over the past 3 years. The maximum reduction that can be allowed for this reinsurance adjustment is 50 percent.

The second calculation is based on claims and is derived from the average claim experience in the previous 3 financial years. If the figures have been distorted by unusual events because the insurer has a concentrated exposure in certain classes of business (namely storms, hail, frost or credit default), an average of the claims experience is taken over the preceding 7 years. The required margin is taken as 26 percent of the first EUR 35 million of adjusted claim amount and 23 percent thereafter. This figure is then adjusted for reinsurance, again up to a maximum of 50 percent.

Adjustments are made to these figures in the event that the insurer writes liability classes of insurance; the amount of the aggregate premium or claims taken at the outset must be increased by 50 percent in both calculations, although the insurer may apply to use statistical methods to allocate this over the past 3 years when the reinsurance adjustment is made. It should also be noted that the member state responsible for the regulation of the insurer may decrease the credit given for reinsurance in the event that the nature and quality of the reinsurance contracts have changed significantly since the last financial year or where there is no risk or an insignificant risk transfer under the reinsurance contracts. An insurer must ensure that its available solvency does not fall below the level of what is referred to as its 'minimum guarantee fund' (the 'MGF').

IRDA's relevant regulations prescribe required solvency margin (RSM) at 20 percent of the net premiums or 30 percent of net incurred claims whichever is higher. The reduction for reinsurance is subject to a maximum which varies from 0.5 to 0.9 depending on the class of business. This formula is similar to the provision applicable under European Union legislation during the early 1990s and is in fact drawn from the same. However, the European Union legislation used a 3-year average net incurred claim basis whereas IRDA's regulations do not provide for such averaging. Besides the statutory provision, IRDA requires maintenance of the solvency margin at 150 percent of the level defined in the regulations as a market practice while granting licence. This formula implies a uniform risk profile across all companies and does not consider the risks to which individual companies are exposed. To that extent, it may be felt that the provisions need a relook. Risk-

Based Capital is an approach that aims to establish each company's requirement of capital based on the risk profile of each individual company from time to time.

11.9.2 Solvency II

Although Solvency I directives went some way to modernising the prudential supervision of insurers, the amendments were essentially limited to updating rules that had remained substantially unchanged since the insurance directives were first implemented. In addition, variations in the way that member states have implemented the insurance directives and differences in accounting methodologies have led to significant differences in the prudential supervision regimes that have developed across the European Community (EC).

At the beginning of 2000, the EC initiated a review of these requirements with a view to considering whether a fundamental change in the prudential supervision of insurers was required in order for the regulation to match more closely the risks of insures. The commission tabled a report, known as 'Solvency II' project. Rather than developing the prudential supervision process by simply building further on the existing rules, the outcome of Solvency II is likely to introduce more far-reaching changes. These are likely to include a move to a more risk-based approach to regulation which will encourage insurers to improve the measurement and monitoring of risks as they occur. It is prescriptive or complex and allows sufficient flexibility in order to allow the insurance market to develop, for example, through further involvement with the derivative market and more efficient use of alternative risk transfer (ART) structures. According to a KMPG study, the following are key areas for consideration under Solvency II:

(i) Identification of the key risks to the financial position of an insurance company, *viz.* underwriting risk, asset risk, credit risk and operation risk.

(ii) Assessment of how these risks interact and overlap with each other and modelling how these are to be managed by the insurer and regulators on a consistent basis with a view to using the models for decision-making purposes.

(iii) Requirements for insurers to disclose information to enable the regulators to assess the strength of an insurer's technical provisions in more detail, such as the methodologies, assumptions applied in determining claims, sensitivity analysis and details of the development of the claims run-off;

(iv) Introduction of a more consistent approach to asset valuation across member states, again applying a more risk-based approach to account for volatility and resilience.

(v) Integration and harmonisation of the approach to the treatment of reinsurance in the solvency calculation;

(vi) Assessment and incorporation of advanced risk reduction techniques, such as ART, into the prudential supervision regime; and consideration of the application of a 'three-pillar' approach to the supervision of insurance undertakings analogous to the approach taken by the Basel Committee for banking. This might be structured as follows:

- *Pillar 1: Financial resources*—to include a risk-based approach to minimum capital requirements and the valuation of assets and liabilities, including assessment of liabilities at a group level.
- *Pillar 2: Supervisory review*—assessment of the strength and effectiveness of risk management systems and internal controls.
- *Pillar 3: Market discipline*—obligations for insurers to make disclosures to allow policyholders to assess key information about the financial strength of insurers.

11.9.3 Solvency Ratio

Solvency ratio means the ratio of the amount of available solvency margin to the amount of required solvency margin. The numerator of the ratio denotes the items such as: (a) capital/funds, (b) various reserves that include price fluctuation reserves and catastrophe reserves, (c) a portion of unrealised profits obtained from real estate and stocks. The above characteristics call on the insurers to follow certain basic principles of asset management: (i) safety—as a minimum fund value should not erode. (ii) Profitability—investment returns must exceed cost of liabilities. There should also be a risk buffer for sudden change in investment environments. (iii) Liquidity—preparing for payment of claims and surrenders. The denominator of the ratio refers to the risks like: (i) underwriting risks: risk of miscalculating premiums and miscalculate technical provisions. (ii) Risks on the expected interest rates: It is considered to be an important factor contributing to the insolvency of an insurance company. (iii) Risks related to asset management: growth risk arising out of exercise growth not matched by sufficient resources or due to wrong selections or wrong pricing of products. In order to maintain healthy asset liability ratio, life insurers all over the world follow one or more of the following assets-liability management methods:

Cash flow testing: The actuary tests the cash flow of the insurance company under various interest rate scenarios.

Cash flow matching: Also known as dedication. A block of liabilities with identified cash flow would be matched with a block of assets with identical cash flow.

Immunisation: Duration of the liability portfolio is estimated and matched with an asset portfolio of identical durations.

11.10 RISK-BASED CAPITAL

Under the risk-based capital regime, the following risks are to be duly recognised.

11.10.1 Current Risks

- *Risk of insufficient tariffs:* Miscalculation, if it was made deliberately, could be classified as a management risk.
- *Deviation risk:* Risk factors changing subsequently claims frequency and extent, mortality, morbidity, price and wage levels, cancellation probability, legislation, and falling interest rates.
- *Evaluation risk:* The risk that the technical provisions are insufficient.
- *Reinsurance risk:* The risk of non-payment by the reinsurer and poor quality of reinsurance.
- *Operation expenses risk:* The risk that the amount for operating expenses is insufficient.
- *Major losses risk (only non-life):* The risk due to the size and number of major losses.
- *Accumulation or catastrophe risk:* The risks due to single events, e.g., earthquakes and storms.

11.10.2 Special Risks

- *Growth risk:* Excessive growth, uncoordinated growth.
- *Liquidation risk:* The risk that the existing funds are insufficient to meet the liabilities and investment risk.

- *Depreciation risk:* Investments losing their value due to credit, non-payment and market risks.
- *Liquidity risk:* Risks due to investments not being able to be liquidated at the right time and in a proper manner.
- *Matching risk:* The risk that the assets are poorly matched to the liabilities.
- *Interest rate risk:* Risk of changing interest rates, including reinvestment risk.
- *Evaluation risk:* The risk that an investment has been evaluated at too high a value.
- *Participation risk:* Risk due to the undertakings holding shares in other weak undertakings.
- *Risks related to the use of derivative financial instruments:* Specific market, credit, and liquidity risks.

11.10.3 Non-Technical Risk

- *Management risk:* Incompetence or criminal intentions of the management. Untrained staff of the undertaking is also a risk.
- *Risk in connection with guarantees in favour of third parties*: Risk that economic capital of the undertaking is strained.
- *Risk of the loss of receivables due from insurance intermediaries:* Risk that external third parties do not meet their obligations.
- *General business risks:* Risk of change in general legal conditions, e.g. tax laws and regulations.

11.11 INSURANCE INDUSTRY IN INDIA

LO 5 Review insurance industry in India and the Policy Developments

The institutions providing insurance services have been an important part of the Indian financial system. One can divide the history of the existence and working of insurance organisations in India in the following three phases:

Phase-I		
Life insurance	1818–1956 (about 138 years)	Many private sector companies only highly competitive
General insurance	1850–1972	Many private sector companies only highly competitive
Phase-II		
Life insurance	1956–2000 (about 44 years)	Nationalisation, public sector and state monopoly; only one company
General insurance	1972–2000 (about 28 years)	Nationalisation, public sector and state monopoly; only one company with its four subsidiaries
Phase-III		
Life insurance and general insurance	After 2000	Opened to the entry of private domestic and foreign companies; mixed sector of public and private sector units; oligopoly of public sector companies.

The life insurance services have been in existence in India since 1818 when the first life insurance company namely, Oriental Life Insurance Company was established in Calcutta. The general insurance service has been available since 1850 when the first Tritan Insurance Company was established, again, in Calcutta. Since

the respective years mentioned above and till 1956/1972, the life and general insurance service industry has grown in terms of the number of companies providing those services, the volume of premium, investible resources and so on. Till 1956/1972, there were a large number of insurance companies (total 352 comprising 245 life and 107 general insurance companies), and all of them were in the private sector. Both the general and life insurance industries were truly competitive. The insurance business was regulated through the Insurance Act, 1938, which itself had evolved through passing certain statutes at various points of time. This picture changed after the independence. In 1956, 245 Indian and foreign life insurers and provident societies were nationalised, and a new single entity namely, Life Insurance Corporation (LIC) was established by passing the LIC Act, 1956. Similarly, in 1972, 107 general insurers were nationalised through the passing of General Insurance Business (Nationalisation) Act, 1972. The then existing 107 insurers were amalgamated and grouped into five companies, *viz.* National Insurance Company (NIC), New India Assurance Company (NIAC), Oriental Insurance Company (OIC), United India Insurance Company (UIIC), and General Insurance Corporation (GIC). Thus, in 1956 and 1972, the competitive, private insurance industry was transformed into monopolistic and oligopolistic state or public sector insurance industry in India. After 2000, the private companies are allowed to do insurance business in India.

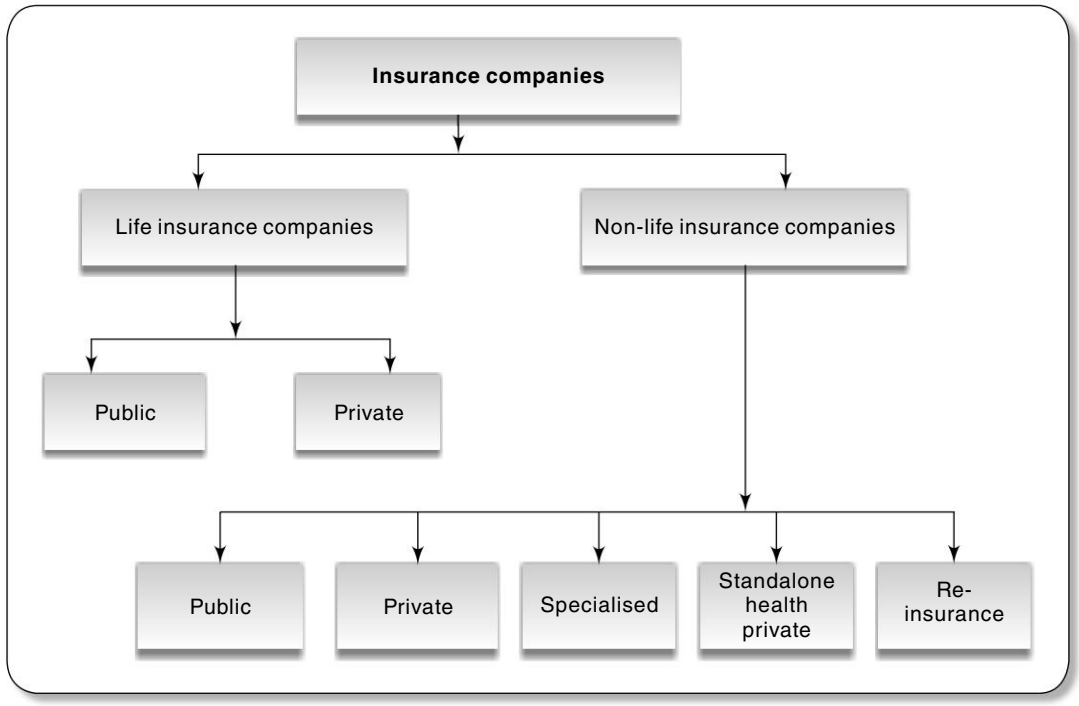


Figure 11.1 **Classification of insurance companies in India.**

11.11.1 Life Insurers in India

Currently, as an 31 March, 2016 one public sector insurer (Life Insurance Corporation of India) and 23 private insurance companies are operating in India. The names of the private insurers are as follows: (1) Aegon Life Insurance Co. Ltd., (2) Aviva Life Insurance Co. India Ltd., (3) Bajaj Allianz Life Insurance Co. Ltd., (4) Bharti AXA Life Insurance Co. Ltd., (5) Birla Sun Life Insurance Co. Ltd., (6) Canara HSBC Oriental

Bank of Commerce Life Insurance Co. Ltd., (7) DHFL Pramerica Life Insurance Co. Ltd., (8) Edleweiss Tokio Life Insurance Co. Ltd., (9) Exide Life Insurance Co. Ltd., (10) Future Generali India Life Insurance Co. Ltd., (11) HDFC Standard Life Insurance Co. Ltd., (12) ICICI Prudential Life Insurance Co. Ltd., (13) IDBI Federal Life Insurance Co. Ltd., (14) India First Life Insurance Co. Ltd., (15) Kotak Mahindra Old Mutual Life Insurance Ltd., (16) Max Life Insurance Co. Ltd., (17) PNB Met Life India Insurance Co. Ltd., (18) Reliance Nippon Life Insurance Co. Ltd. (19) Sahara India Life Insurance Co. Ltd., (20) SBI Life Insurance Co. Ltd., (21) Shriram Life Insurance Co. Ltd., (22) Star Union Dai-ichi Life Insurance Co. Ltd., and (23) TATA AIA Life Insurance Co. Ltd.

A large number of insurance policies have been introduced and popularised by the life insurance companies. A study of the provisions of these plans, the essential differences between them and the principles underlying those plans are interesting and essential from the point of view of management of insurance companies. However, since the focus of our discussion is elsewhere, we do not intend to describe these policies here. We would simply mention the names of these policies and point out their characteristics as financial claims. Like insurance companies in other countries, the LIC also offers various schemes, policies and plans to the investors. There are individual insurance, group insurance, group gratuity, group superannuation, non-medical insurance, salary saving insurance, annuities and many other schemes.

11.11.2 Non-Life Insurers in India

As on 31 March 2016, there are 30 non-life insurance companies in India including one reinsurer. Out of these five private sector insurers are registered to underwrite policies exclusively in health, personal accident and travel insurance segments. They are Star Health and Allied Insurance Company Ltd., Apollo Munich Health Insurance Company Ltd., Max Bupa Health Insurance Company Ltd., Religare Health Insurance Company Ltd. and Cigna TTK Health Insurance Company Ltd. There are two more specialised insurers belonging to public sector, namely, Export Credit Guarantee Corporation of India for Credit Insurance and Agriculture Insurance Company Ltd. for crop insurance. GIC is the national reinsurer, providing reinsurance to the direct general insurance companies in India. The Corporation's reinsurance program has been designed to meet the objectives of optimising the retention within the country, ensuring adequate coverage for exposure and developing adequate capacities within the domestic market. Other public sector non-life insurers are: (1) National Insurance Co. Ltd., (2) The New India Assurance Co. Ltd., (3) The Oriental Insurance Co. Ltd. and (4) United India Insurance Co. Ltd. The private sector insurers are: (1) Bajaj Allianz General Insurance Co. Ltd., (2) Bharti AXA General Insurance Co. Ltd., (3) Cholamandalam MS General Insurance Co. Ltd., (4) Future Generali India Insurance Co. Ltd., (5) HDFC ERGO General Insurance Co. Ltd., (6) ICICI Lombard General Insurance Co. Ltd., (7) IFFCO Tokio General Insurance Co. Ltd., (8) L & T General Insurance Co. Ltd., (9) Liberty Videocon General Insurance Co. Ltd., (10) Magma HDI General Insurance Co. Ltd., (11) Raheja QBE General Insurance Co. Ltd., (12) Reliance General Insurance Co. Ltd., (13) Royal Sundaram General Insurance Co. Ltd., (14) SBI General Insurance Co. Ltd., (15) Shriram General Insurance Co. Ltd., (16) TATA AIG General Insurance Co. Ltd., (17) Universal Sompo General Insurance Co. Ltd., and (18) Kotak Mahindra General Insurance Co. Ltd.

11.12 POLICY DEVELOPMENTS

After the introduction of New Economic Policy in 1991, the government appointed Malhotra Committee in 1993 to suggest insurance sector reforms in tune with other financial and economic reforms. The Committee, *inter alia*, made the following recommendations:

- The central and zonal offices of the LIC should be restructured and reorganised such that while the central office should concentrate on policy formulation, review, evaluation, product development, pricing, acturial valuation, investments, personnel policies, systems development and so on; the zonal offices should look after the insurance business and related matters.
- The government stake in the insurance companies should be reduced to 50 percent.
- The GIC should cease to be a holding company. The Government should take over the holdings of GIC and its subsidiaries so that they can act as independent corporations. GIC should function exclusively as a reinsurance company.
- All insurance companies should be given greater freedom to operate.
- Private insurance companies with a minimum paid-up capital of ₹100 crore should be allowed to enter the insurance industry. The promoter's holding in a private company should not be less than 26 percent and more than 40 percent of the paid-up capital. No person other than the promoter should hold more than one percent of equity.
- The insurance companies should not be allowed to deal in both life and general insurance through a single entity.
- Foreign companies may be allowed to enter the industry selectively and in collaboration with domestic companies.
- Postal life insurance should be allowed to operate in the rural market.
- The insurance regulatory body be set up, and the Controller of Insurance should be separated from Finance Ministry and made independent. Regulatory, prudential norms should be finalised to ensure a level playing field.
- The capital of the LIC should be raised from the present ₹5 to 200 crore, 50 percent of which should be held by the government and the remainder should be held by the public at large including the LIC employees for whom a suitable proportion be reserved.
- Mandatory investments of LIC in government securities should be reduced from 75 percent to 50 percent.
- The capital of the GIC be raised from the present ₹107.5 to 200 crore, its holding distribution being similar to that of the LIC.
- GIC and its subsidiaries should not hold more than 5 percent of capital in any company.
- The capital of each of the GIC subsidiaries is ₹40 crore at present and it is held by the GIC. The government should acquire this capital of each subsidiary from the GIC, raise it to ₹100 crore, whose holding distribution should be similar to that of the LIC and GIC.
- LIC should pay interest on delays in payment beyond 30 days.
- LIC and GIC should operate as board-run enterprises. The institution of Ombudsman should be set up by the general insurance industry.

The insurance sector in India has gone through the process of reforms following these recommendations. The Insurance Regulatory and Development Authority (IRDA) Bill was passed by the Indian Parliament in

December 1999. The IRDA became a statutory body in April 2000 and has been framing regulations and registering the private sector insurance companies. The insurance sector was opened up to the private sector in August 2000. In the insurance sector, the major policy initiatives included are as follows:

- De-tariffing of the general insurance industry. This measure was aimed at providing better choices to policyholders, differentiated rates consistent with the level of risks borne as well as overall improvement in risk management.
- In October 2004, the RBI permitted Regional Rural Banks (RRBs) to take on insurance business as a 'Corporate agent'.
- Obligations towards the rural and social sectors. The IRDA Regulations, 2002, had laid down the obligations of the insurers for the first 5 years of operations. Amendments to the regulations incorporating the obligations of the insurers up to the 10th year and thereafter have been notified during 2007.
- IRDA had done away with the tariffs on the rates of general insurance products from 1 January, 2007. IRDA has advised all insurance companies to furnish details of the initiatives taken to promote micro-insurance as a viable business opportunity, with particular reference to understanding the constraints faced by them. With a view to synergising the efforts of all state governments which are promoting the poverty alleviation programmes, the IRDA has requested the state governments to publicise the concept of micro-insurance through their various agencies.
- While permitting foreign participation in the ventures set up by the private sector, the government restricted participation of the foreign joint venture partner through the FDI route to 26 percent of the paid-up equity of the insurance company.
- Every insurer is required to maintain a required solvency margin as per Section 64VA of the Insurance Act 1938. Every insurer shall maintain an excess of the value of assets over the amount of liabilities of not less than an amount prescribed by the IRDA, which is referred to as a required solvency margin. In the case of life insurers, the required solvency margin is the higher of an amount of ₹50 crore and a sum which is based on a formula given in the said regulations. In the case of general insurers, the required solvency margin shall be maximum of the following amounts: 50 crore of rupees (one hundred crore of rupees in the case of reinsurer); or a sum equivalent to 20 percent of net premium income; or a sum equivalent to 30 percent of net incurred claims, subject to credit for reinsurance in computing net premiums and net incurred claims being actual but a percentage, determined by the regulations, not exceeding 50 percent. IRDA has set a working solvency margin ratio (the ratio of actual solvency margin to the required solvency margin) of 1.5 for all insurers.
- The Insurance Laws (Amendment) Bill 2015 provides for imprisonment of up to 10 years for selling policies without registration with the regulator IRDA.
- Under the new provisions, the Life Insurance Council and the General Insurance Council would act as self-regulating bodies for the insurance sector. It also allows insurers to raise capital through new instruments and do away with the restrictions on divestment of stake by Indian promoters of the joint venture.
- The Bill seeks to put a minimum capital requirement for health insurers at ₹100 crore.
- The Insurance Amendment Act defines reinsurance as the insuring of part of one insurer's risk by another insurer who accepts the risk for a mutually acceptable premium. The minimum capital requirement for a reinsurance company has been fixed at ₹200 crore.

- The Insurance Amendment Act also permits foreign reinsurance companies to establish branches in India, provided the net worth of the foreign company is at least ₹5000 crore.
- The Bill provides for general insurance companies to raise funds from the capital markets with the permission of the government. Under the current laws, insurance companies may raise only equity share capital.
- The Bill proposes to allow foreign insurers to operate in SEZs without regulatory control but allows the government in its discretion to allow any of the provisions of the Insurance Act to be applicable to such insurers.
- The Bill also proposes, amongst others, to provide greater protection to the insured by imposing penalties to those insurers who fail to meet their obligations with respect to underwriting third party motor insurance or other insurance policies in rural sectors and allows for the partial assignment of insurance policies. The Bill also does away with the existing requirement for Indian promoters of an insurance company to reduce their stake to 26 percent over a period of 10 years.
- The General Insurance Corporation is the sole national reinsurer in the country.
- Foreign investment has been allowed through automatic route for up to 49 percent subject to the guidelines on Indian management and control to be verified by the regulators.
- Service tax on single premium annuity policies has been reduced from 3.5 percent to 1.4 percent of the premium paid in certain cases.
- Government insurance companies have been allowed to be listed on the exchanges.
- Service tax on service of life insurance business provided by way of annuity under the National Pension System regulated by Pension Fund Regulatory and Development Authority (PFRDA) being exempted, with effect from 1 April, 2016.
- The Insurance Regulatory and Development Authority (IRDA) of India has formed two committees to explore and suggest ways to promote e-commerce in the sector in order to increase insurance penetration and bring financial inclusion.
- IRDA has formulated a draft regulation, IRDAI (Obligations of Insures to Rural and Social Sectors) Regulations, 2015, in pursuance of the amendments brought about under section 32B of the Insurance Laws (Amendment) Act, 2015. These regulations impose obligations on insurers towards providing insurance cover to the rural and economically weaker sections of the population.
- The Government of India has launched two insurance schemes as announced in Union Budget 2015–2016. The first is *Pradhan Mantri Suraksha Bima Yojana* (PMSBY), which is a Personal Accident Insurance Scheme. The second is *Pradhan Mantri Jeevan Jyoti Bima Yojana* (PMJJBY), which is the government's Life Insurance Scheme. Both the schemes offer basic insurance at minimal rates and can be easily availed through various government agencies and private sector outlets.
- Approval to increase stake of foreign investors to 49 percent equity investment in insurance companies.
- The GOI has also launched its new Social Security initiative—*Aam Admi Bima Yojana* (Common Person's Insurance Programme) for poor families that do not own agricultural land. It extends death and disability coverage to an estimated 15 million rural and landless households. Under this programmes, the State and the Union governments are expected to bear the premium of ₹200 for every policy holder who is insured to the extent of ₹50,000 in the case of natural death and ₹75,000 in the case of an accident.
- Every insurer should retain risk proportionate to its financial strength and business volume.

- Certain percentage of the sum assured on each policy by an insurance company is to be reinsured with the National Reinsurer. National Reinsurer has been made compulsory only in the non-life sector.
- The reinsurance programme will begin at the start of each financial year and has to be submitted to the IRDA 45 days before the start of the financial year.
- Insurers must place their reinsurance business, in excess of limits defined outside India with only those reinsurers who have a rating of at least BBB standard and poor (S&P) for the preceding 5 years. This limit has been derived from India's own Sovereign rating, which currently stands at BBB.
- Private life insurance companies cannot enter into reinsurance with their promoter company or its associates, though the LIC can continue to reinsure its policies with GIC.
- The four public sector general insurance companies, presently required as per the General Insurance Business (Nationalisation) Act, 1972 (GIBNA, 1972) to be 100 percent government owned, are now allowed to raise capital, keeping in view the need for expansion of the business in the rural and social sectors, meeting the solvency margin for this purpose and achieving enhanced competitiveness subject to the Government equity not being less than 51 percent at any point of time.
- The amendment Act defines 'health insurance business' inclusive of travel and personal accident cover and discourages non-serious players by retaining capital requirements for health insurers at the level of ₹100 crore, thereby paving the way for promotion of health insurance as a separate vertical.
- Appeals against the orders of IRDAI are to be preferred to SAT as the amended Law provides for any insurer or insurance intermediary aggrieved by any order made by IRDAI to prefer an appeal to the Securities Appellate Tribunal (SAT).
- The Insurance Regulatory and Development Authority of India (IRDAI) plans to issue redesigned initial public offering (IPO) guidelines for insurance companies in India, which are looking to divest equity through the IPO route.
- Insurance companies have to furnish details of expenses in the format, that is form 17D prescribed by the regulator for every financial year. The regulators track the expenses and cost structures, send warnings to the management teams and penalise companies failing to adhere to guidelines.
- The service tax charged by insurance companies has increased to 12 percent from the existing 10 percent. The rate on life insurance policies where entire premium is not towards risk covered increased to 3 percent for the first year maintained at 1.5 percent for subsequent years' policies at a time when mutual funds are exempt from such tax. On the other hand, the 2012 Budget mandated that the sum assured be at least 10 times the premium (from the existing five times), compulsory service tax has been levied on all insurance.
- With Health insurance portability being introduced, insured persons are likely to get credits for the covered term across the industry and will be limited to a specific insurance company. The regulator envisaged that this initiative will compel the insurance industry to act towards standardisation of costs incurred in treatment, fix accountability and transparency about costs and push insurers to think about product innovations to survive competition.
- The IRDA has dismantled the third-party liability pool in motor insurance and replaced it with the declined risk pool. While it is likely to have widespread implications on the size and loss ratio of the pool, the move is expected to drive the industry towards risk-based pricing.
- IRDA dismantled the existing India Motor-Third Party Insurance Premium (IMTPIP) with effect from March 2012, and has setup the framework for a declined risk pool for commercial vehicles.

- IRDA issued guidelines for health insurance portability with effect from October 2011 mandating all insurers to allow credit gained by the insured for existing conditions, e.g., waiting period and sum assured, in the event of switching between insurers/plans, provided the existing policy has been maintained without a break.
- IRDA issued the norms for mergers and acquisitions of general insurance companies in June 2011 mandating interested parties to file the draft of the proposed merger and respective balance sheets with the regulator for seeking approval. Additional approvals from RBI, SEBI and FIPB are also mandated at a processing fee of 0.001 percent of gross written premium in preceding year. The proposed change will increase administrative costs and may cause delays.
- IRDA has mandated a minimum business requirement norm for licensing agent. This is expected to reduce part-time agents thus improve customer service.
- Even in case the policy is surrendered, 2/3 of accumulated funds will be used to purchase an annuity.
- Training of tele-callers has been made mandatory.

11.13 INSURANCE PENETRATION AND DENSITY

The measure of insurance penetration and density reflects the level of development of insurance sector in a country. While insurance penetration is measured as the percentage of insurance premium to GDP, insurance density is calculated as the ratio of premium to population (per capita premium).

During the first decade of insurance sector liberalisation, the sector has reported consistent increase in insurance penetration from 2.71 percent in 2001 to 5.20 percent in 2009. Since then, the level of penetration was declining. However, there was a slight increase in 2015 reaching 3.44 percent compared to 3.3 percent in 2014. A similar trend is also observed in the level of insurance density, which reached the maximum of USD 64.4 in the year 2010 from the level of USD 11.5 in 2001. During the year 2015, the insurance density was USD 54.7. The insurance density of life insurance business had gone up from USD 9.1 in 2001 to the peak at USD 55.7 in 2010. During 2015, the level of life insurance density was USD 43.2. Similarly, the life insurance penetration surged from 2.15 percent in 2001 to 4.60 percent in 2009. Since then, it has exhibited a declining trend. However, there was a slight increase in 2015 reaching 2.72 percent in 2015 when compared to 2.6 percent in 2014. Over the last 10 years, the penetration of non-life insurance sector in the country remained steady in the range of 0.5–0.8 percent. However, its density has gone up from USD 2.4 in 2001 to USD 11.5 in 2015 (Table 11.1).

Table 11.1 Insurance penetration and density in India

Year	*Life insurance*		*Non-life insurance*		*Total industry*	
	Density (US dollar)	*Penetration (percent)*	*Density (US Dollar)*	*Penetration (percent)*	*Density (US dollar)*	*Penetration (percent)*
2001	9.1	2.15	2.4	0.56	11.5	2.71
2005	18.3	2.53	4.4	0.61	22.7	3.14
2010	55.7	4.40	8.7	0.71	64.4	5.10
2011	49.0	3.40	10.0	0.70	59.0	4.10

(*Contd.*)

2012	42.7	3.17	10.5	0.78	53.2	3.96
2013	41.0	3.10	11.0	0.80	52.0	3.90
2014	44.0	2.60	11.0	0.70	55.0	3.30
2015	43.2	2.72	11.5	0.72	54.7	3.44

Source: IRDA, Annual Reports Various Issues.

In the year 2015, the total insurance penetration has been highest in South Africa followed by South Korea, Japan and United Kingdom. In terms of life insurance, it is highest in South Africa followed by Japan, United Kingdom and South Korea. For non-life insurance, it is highest in the United States followed by South Korea and Germany. The total insurance density is the highest in the United Kingdom followed by the United States. For life insurance, it is highest in the United Kingdom followed by Japan and in the case of non-life insurance, it is highest in United States followed by Germany (Table 11.2).

Table 11.2 Insurance penetration and density of select countries in the year 2015

Country	*Insurance penetration*			*Insurance density*		
	Life	*Non-life*	*Total*	*Life*	*Non-life*	*Total*
Australia	3.5	2.2	5.7	1830	1128	2958
Brazil	2.1	1.8	3.9	178	154	332
France	6.2	3.1	9.3	2263	1129	3392
Germany	2.9	3.4	6.3	1181	1381	2562
South Africa	12.0	2.7	14.7	688	155	843
UK	7.5	2.4	9.9	3392	1067	4459
USA	3.1	4.2	7.3	1719	2377	4096
India	2.7	0.7	3.4	43	12	55
Japan	8.3	2.6	10.9	2717	837	3554
China	2.0	1.6	3.6	153	128	281
South Korea	7.3	4.1	11.4	1940	1094	3034
World	3.5	2.8	6.3	346	276	622

Source: IRDA, Annual Reports Various Issues.

11.14 GROWTH OF LIFE INSURANCE

LO 6
Growth of life insurance and non-life insurance

The first year premium and total premium of all the life insurance companies have increased continuously during the period 2000–2001 to 2015–2016. In both the cases, the share of LIC, the public sector company has been very high in comparison with the private sector companies. The share of LIC has been varying between 65 and 99 percent, and the share of private companies has been varying between 0.02 and 30 percent (Table 11.3). The increasing in the share of the private sector after 2000–2001 is due to the opening of the insurance sector to the private companies in that year. Out of the total investments made by the life insurance companies, the share of the LIC is always more than 80 percent throughout the period (Table 11.4).

Table 11.3 Total life insurance premium (all values are in ₹ crore and values in the bracket are percentage to total premium)

	First year premium		*Total premium*	
Year	*LIC*	*Private*	*LIC*	*Private*
2000–2001	9700.98 (99.93)	6.45 (0.07)	34892.02 (99.98)	6.45 (0.02)
2005–2006	28515.87 (73.52)	10269.6 (26.48)	90972.22 (85.78)	15083.54 (14.22)
2009–2010	71521.9 (65.08)	38372.01 (34.92)	186077.3 (70.10)	79369.94 (29.90)
2010–2011	87012.35 (68.84)	39385.84 (31.16)	203473.4 (69.77)	88165.24 (30.23)
2011–2012	81862.25 (71.83)	32103.78 (28.17)	202889.3 (70.68)	84182.83 (29.32)
2012–2013	76611.5 (71.36)	30749.58 (28.64)	208803.6 (72.70)	78398.91 (27.30)
2013–2014	90808.79 (75.47)	29516.43 (24.53)	236942.3 (75.39)	77359.36 (24.61)
2014–2015	78507.72 (69.27)	34821.81 (30.73)	239667.7 (73.05)	88434.35 (26.95)
2015–2016	97891.51 (70.50)	40970.8 (29.50)	266444.2 (72.61)	100499 (27.39)

Source: IRDA, Annual Reports Various Issues.

Table 11.4 Total investments by life insurers.

Year	*Public (LIC)*		*Private*		*Total*	
	(In ₹ Crore)	*Percentage to Total*	*(In ₹ Crore)*	*Percentage to Total*	*(In ₹ Crore)*	*Percentage to Total*
2004–2005	418289	97.63	10162	2.37	428451	100
2009–2010	985028	81.73	220127	18.27	1205155	100
2010–2011	1148589	80.31	281528	19.69	1430117	100
2011–2012	1269070	80.26	312188	19.74	1581258	100
2012–2013	1402991	80.41	341902	19.59	1744893	100
2013–2014	1574296	80.43	383169	19.57	1957465	100
2014–2015	1786312	79.48	461210	20.52	2247522	100
2015–2016	2009119	80.30	492949	19.70	2502068	100

Source: IRDA, Annual Reports Various Issues.

Table 11.5 shows that the traditional instruments are the preferred investment alternatives over the ULIPs throughout the period. The share of traditional investment alternatives together constitute more than 80 percent and among all the traditional investments the share of central government securities has been the

Table 11.5 Investments of life insurance: investment wise (percentage to total investments)

Year	Traditional						ULIP		
	Central Govt. Sec	State Govt. and other approved sec	Housing and infra-structure	Approved invest-ment	Other invest-ments	Total	Approved	Other invest-ments	Total
2010–2011	29.43	12.15	6.24	21.33	2.95	72.09	26.00	1.90	27.91
2011–2012	29.60	13.57	6.15	24.35	2.93	76.60	21.90	1.49	23.40
2012–2013	29.35	15.24	6.81	26.15	2.81	80.37	18.64	0.99	19.63
2013–2014	30.89	17.06	7.92	25.70	1.49	83.06	16.47	0.47	16.94
2014–2015	32.17	19.16	7.76	23.61	1.17	83.86	15.68	0.46	16.14
2015–2016	33.21	21.11	7.44	23.31	1.32	86.39	13.15	0.46	13.61

Source: IRDA, Annual Reports Various Issues.

highest. In the recent year 2015–2016, the share of ULIP investments has gone down to 13.61 percent. It could be due to the volatility in the equity market (Table 11.5). In terms of the fund wise investments, LIC also dominates over the private companies and among all types of funds, life funds are more preferred for investment (Table 11.6).

Table 11.6 Investments of life insurance: fund wise (percentage to total investments)

Year	Public (LIC)				Private			
	Life fund	Premium and general fund	Unit trust fund	Total	Life	Premium	Unit trust fund	Total
2010–2011	55.81	12.11	12.37	80.31	2.99	0.07	0.15	19.68
2011–2012	57.84	13.45	8.961	80.25	3.79	0.10	0.14	19.74
2012–2013	59.46	14.38	6.55	80.40	4.71	0.13	0.13	19.59
2013–2014	60.33	15.26	4.82	80.42	5.47	0.16	0.12	19.57
2014–2015	60.50	15.29	3.67	79.47	6.02	0.16	0.12	20.52
2015–2016	61.03	16.49	2.77	80.29	6.81	0.19	0.10	19.70

Source: IRDA, Annual Reports Various Issues.

The share of total income of LIC is also higher than the private sector companies throughout the period, and for both LIC and private companies, the share of premium income has been the highest (Table 11.7). For LIC, the commission expenses were more than the operating expenses in the year 2008–2009, but further the share of operating expenses has increased continuously. For private companies, throughout the period the operating expenses have been more than the commission expenses (Table 11.8).

Table 11.7 Income of life insurance companies (percentage to total income)

Year	*Public (LIC)*			*Private*		
	Premium income	*Income from investments*	*Total*	*Premium income*	*Income from investments*	*Total*
2008–2009	57.19	15.56	72.76	23.45	3.79	27.24
2009–2010	44.23	26.72	70.95	18.87	10.18	29.05
2010–2011	49.23	23.22	72.45	21.33	6.22	27.55
2011–2012	53.43	22.53	75.96	22.17	1.87	24.04
2012–2013	46.56	26.20	72.76	17.48	9.75	27.24
2013–2014	48.74	29.41	78.15	15.91	5.94	21.85
2014–2015	41.69	29.24	70.93	15.38	13.68	29.07
2015–2016	49.53	29.36	78.89	18.68	2.43	21.11

Source: IRDA, Annual Reports Various Issues.

Table 11.8 Expenses of life insurance companies (percentage to total expenses)

Year	*Public (LIC)*			*Private*		
	Commission expenses	*Operating expenses*	*Total*	*Commission expenses*	*Operating expenses*	*Total*
2008–2009	24.31	21.92	46.23	13.24	40.53	53.77
2009–2010	25.82	26.06	51.88	12.88	35.24	48.12
2010–2011	26.03	33.12	59.15	9.72	31.13	40.85
2011–2012	29.18	30.95	60.12	9.25	30.63	39.88
2012–2013	29.11	32.88	61.99	8.80	29.21	38.01
2013–2014	29.99	36.28	66.27	7.30	26.43	33.73
2014–2015	26.84	39.77	66.61	7.71	25.68	33.39
2015–2016	26.25	38.43	64.68	8.07	27.25	35.32

Source: IRDA, Annual Reports Various Issues.

Table 11.9 shows the trends in percentage of equity share capital and average solvency ratio of LIC and private companies. As LIC is a government company, the equity shares of LIC is very negligible in comparison to the private companies. The average solvency ratio of the private companies is also higher than LIC throughout the period.

Table 11.9 Equity share capital and average solvency ratio of life insurers

Year	*Equity capital (percent)*		*Average solvency ratio*	
	Public (LIC)	*Private*	*Public (LIC)*	*Private*
2008–2009	0.03	99.97	1.54	3.04
2009–2010	0.02	99.98	1.54	2.96

(*Contd.*)

2010–2011	0.02	99.98	1.54	3.28
2011–2012	0.40	99.60	1.54	3.88
2012–2013	0.39	99.61	1.58	3.6
2013–2014	0.39	99.61	1.54	3.65
2014–2015	0.38	99.62	1.52	3.76
2015–2016	0.37	99.63	1.55	3.52

Source: IRDA, Annual Reports Various Issues.

11.15 GROWTH OF NON-LIFE INSURANCE

The share of public sector companies has been more than the private companies in terms of the gross direct premium and it has been observed that the share of private companies has been increasing throughout the period. The share of standalone private health insurance companies and specialised companies does not follow any particular trend (Table 11.10). The contribution of motor insurance is maximum to the total gross direct premium followed by health insurance across the years (Table 11.11).

Table 11.10 Total gross direct premium of non-life insurer

(*Percentage*)

Year	*Public*	*Private*	*Standalone health private*	*Specialised insurers*
2000–2001	99.93	0.07	0.00	0.00
2005–2006	71.09	23.86	0.00	5.04
2008–2009	56.93	36.71	1.66	4.70
2009–2010	55.67	35.63	2.74	5.95
2010–2011	54.79	36.14	3.19	5.88
2011–2012	53.93	37.30	2.77	5.99
2012–2013	52.06	39.25	2.42	6.26
2013–2014	51.27	40.05	2.81	5.88
2014–2015	51.65	40.26	3.38	4.71
2015–2016	50.98	39.96	4.18	4.87

Source: IRDA, Annual Reports Various Issues.

Public sector companies' investments dominate the private sector insurance companies' investments throughout the period, but the share of private sector insurance companies has been increasing continuously (Table 11.12). Like life insurance companies, the non-life insurance companies also mostly investing in the traditional instruments and government securities are the most preferred investment alternatives (Table 11.13).

Table 11.11 Gross direct premium of non-life insurer (segment wise) (percentage to total).

Year	Fire		Marine		Motor		Health			Others			Total	
	Public	Private	Public	Private	Public	Private	Public	Private	Standalone health insurance	Public	Private	Specialised insurers	Public	Private
2008–2009	7.18	3.97	4.34	2.11	23.73	20.21	12.73	7.33	0.00	11.43	6.98	0.00	59.41	40.59
2009–2010	7.44	3.74	4.49	1.77	22.22	21.25	14.39	6.73	0.00	11.09	6.89	0.00	59.63	40.37
2010–2011	7.25	3.45	4.23	1.68	21.00	21.68	16.24	7.12	0.00	10.36	6.99	0.00	59.07	40.93
2011–2012	6.77	3.50	3.80	1.64	22.25	23.59	15.41	6.86	0.00	9.57	6.61	0.00	57.80	42.20
2012–2013	6.69	3.88	3.33	1.48	22.05	25.01	15.23	6.96	0.00	8.31	7.06	0.00	55.61	44.39
2013–2014	6.32	4.15	2.96	1.51	22.37	25.54	15.44	6.74	0.00	7.58	7.40	0.00	54.67	45.33
2014–2015	5.64	3.87	2.23	1.34	20.75	23.39	16.10	7.16	3.47	5.52	5.69	4.84	50.25	41.44
2015–2016	5.07	3.99	1.80	1.30	20.46	23.43	17.12	7.06	4.31	5.03	5.41	5.02	49.48	41.19

Source: IRDA, Annual Reports Various Issues.

Table 11.12 Total investments by non-life insurers

Year	Public		Private		Total	
	(In ₹ Crore)	Percentage to total	(In ₹ Crore)	Percentage to total	(In ₹ Crore)	Percentage to total
2004–2005	34856	93.17	2555	6.83	37411	100
2009–2010	51687	77.87	14685	22.13	66372	100
2010–2011	61235	74.21	21285	25.79	82520	100
2011–2012	71104	71.63	28165	28.37	99269	100
2012–2013	83644	68.01	39348	31.99	122992	100
2013–2014	93785	67.08	46025	32.92	139810	100
2014–2015	103561	64.44	57153	35.56	160714	100
2015–2016	122560	65.15	65565	34.85	188125	100

Source: IRDA, Annual Reports Various Issues.

Table 11.13 Total Investments of non-life insurance: investment wise (all values in percentage to total)

Year	Traditional				ULIP	
	Central government securities	State govt. and other approved securities	Housing and loans to state govt. for housing	Infrastructure	Approved	Other investments
2008–2009	24.78	10.32	7.21	15.25	35.71	6.74
2009–2010	24.16	10.5	7.22	15.63	36.55	5.94
2010–2011	24.07	9.93	8.45	14.8	38.50	4.25
2011–2012	24.42	9.41	8.26	15.31	38.85	3.78
2012–2013	24.93	10.56	8.35	15.45	35.93	4.78
2013–2014	25.66	10.25	9.11	17.56	35.24	2.19
2014–2015	26.7	10.65	9.23	16.97	33.43	3.01
2015–2016	26.57	11.78	10.37	16.98	31.00	3.30

Source: IRDA, Annual Reports Various Issues.

Premium income is the major source of income and operating expense is the major source of expenditure for both public and private sector insurance companies in India (Tables 11.14 and 11.15). Like life insurance companies, the equity share of the private companies has been quite high in comparison with public sector and other insurance companies. The average solvency ratio of the specialised insurers is higher than other types of companies throughout the period. For other companies, it has been fluctuating across the years (Tables 11.16 and 11.17).

Table 11.14 Income of non-life insurance companies (percentage to total income)

Year	Public			Private		
	Premium income	Income from investments	Total	Premium income	Income from investments	Total
2008–2009	49.75	13.24	62.99	34.00	3.01	37.01
2009–2010	48.79	15.00	63.80	33.04	3.17	36.20
2010–2011	48.41	15.09	63.50	33.54	2.96	36.50
2011–2012	48.99	11.90	60.89	35.77	3.34	39.11
2012–2013	46.96	11.55	58.51	37.48	4.01	41.49
2013–2014	45.96	11.19	57.14	38.11	4.74	42.86
2014–2015	42.01	10.59	52.60	34.64	4.71	39.35
2015–2016	41.30	10.52	51.82	34.38	4.93	39.30
Panel-B	*Standalone private health insurers*			*Specialised insures*		
2008–2009	—	—	—	—	—	—
2009–2010	—	—	—	—	—	—
2010–2011	—	—	—	—	—	—

(*Contd.*)

2011–2012	—	—	—	—	—	—
2012–2013	—	—	—	—	—	—
2013–2014	—	—	—	—	—	—
2014–2015	2.91	0.18	3.08	4.05	0.92	4.97
2015–2016	3.60	0.21	3.81	4.19	0.87	5.07

Source: IRDA, Annual Reports Various Issues.

Table 11.15 Expenses of non-life insurance companies (percentage to total expenses)

Year	*Public*			*Private*		
	Commission expenses	*Operating expenses*	*Total*	*Commission expenses*	*Operating expenses*	*Total*
2008–2009	17.19	44.73	61.93	7.03	31.05	38.07
2009–2010	16.76	48.30	65.06	6.21	28.73	34.94
2010–2011	14.53	50.00	64.53	6.08	29.39	35.47
2011–2012	15.56	45.22	60.77	7.44	31.79	39.23
2012–2013	14.27	45.77	60.03	8.63	31.34	39.97
2013–2014	14.54	44.53	59.07	8.88	32.05	40.93
2014–2015	12.22	43.99	56.20	6.93	29.61	36.54
2015–2016	11.51	43.16	54.67	6.83	31.06	37.89
Panel-B	*Standalone private health insurers*			*Specialised insures*		
2008–2009	—	—	—	—	—	—
2009–2010	—	—	—	—	—	—
2010–2011	—	—	—	—	—	—
2011–2012	—	—	—	—	—	—
2012–2013	—	—	—	—	—	—
2013–2014	—	—	—	—	—	—
2014–2015	1.23	4.82	6.04	0.13	1.08	1.22
2015–2016	1.57	4.81	6.39	0.10	0.95	1.05

Source: IRDA, Annual Reports Various Issues.

Table 11.16 Equity share capital of non-life insurers (in percentage)

Year	*Public*	*Private*	*Standalone health private*	*Specialised insures*	*Reinsurers*
2008–2009	17.84	82.16	—	—	—
2009–2010	14.82	85.18	—	—	—
2010–2011	8.20	58.99	9.99	16.40	6.41
2011–2012	7.03	62.11	11.31	14.06	5.49
2012–2013	6.30	62.70	13.90	12.59	4.51

(*Contd.*)

2013–2014	5.86	60.80	16.44	12.69	4.20
2014–2015	5.65	60.61	17.84	12.17	3.74
2015–2016	5.16	60.83	18.70	11.90	3.41

Source: IRDA, Annual Reports Various Issues.

Table 11.17 Average solvency ratio of non-life insurers

Year	*Public*	*Private*	*Standalone Health Private*	*Specialised Insures*	*Reinsurers*
2008–2009	2.49	2.02	6.05	—	3.67
2009–2010	2.53	2.79	4.33	—	3.71
2010–2011	2.11	2.49	1.81	6.38	3.35
2011–2012	1.87	2.36	1.72	6.64	1.59
2012–2013	2.00	2.75	2.06	6.05	2.39
2013–2014	2.07	2.01	1.85	6.81	2.73
2014–2015	2.00	2.19	2.07	4.89	3.04
2015–2016	1.76	1.94	2.61	6.52	3.48

Source: IRDA, Annual Reports Various Issues.

SUMMARY

- Insurance is a form of financial risk management tool in which the insured transfers the risk of a potential financial loss to the insurance company (insurer), which mitigates it in exchange for a monetary compensation popularly known as insurance premium.
- There are eight principles of insurance, principle of utmost good faith, principle of insurable interest, principle of indemnity, principle of subrogation, principle of warranties, principle of cause proxima, principle of contribution and principle of loss minimisation.
- The insurance companies are financial intermediaries as they collect and invest large amounts of premiums. They offer protection to the investors, provide means for accumulating savings and channelise funds to the government and other sectors.
- Broadly, there are two types of insurance companies, that is, life insurance companies and non-life insurance companies.
- At present, both life and general insurance business is carried out by both the public and private sector companies, but the business is dominated by the public sector organisations.
- The objective of Asset-Liability Management (ALM) in an insurance company is to measure and manage the insurer's investment and liability risk to meet solvency, marketing and profitability targets.
- Solvency margin is the amount by which the assets of an insurer exceed its liabilities, and will form part of the insurer's shareholder's funds.

- Solvency ratio means the ratio of the amount of available solvency margin to the amount of required solvency margin.
- Currently, as on 31 March, 2016, one public sector insurer (Life Insurance Corporation of India) and 23 private life insurance companies are operating in India.
- As on 31 March, 2016, there are 30 non-life insurance companies in India including one reinsurer.
- IRDA has formulated a draft regulation, IRDAI (Obligations of Insures to Rural and Social Sectors) Regulations, 2015, in pursuance of the amendments brought about under section 32B of the Insurance Laws (Amendment) Act, 2015. These regulations impose obligations on insurers towards providing insurance cover to the rural and economically weaker sections of the population.
- The Government of India has launched two insurance schemes as announced in Union Budget 2015–2016. The first is *Pradhan Mantri Suraksha Bima Yojana* (PMSBY), which is a Personal Accident Insurance Scheme. The second is *Pradhan Mantri Jeevan Jyoti Bima Yojana* (PMJJBY), which is the government's Life Insurance Scheme.
- The measure of insurance penetration and density reflects the level of development of insurance sector in a country. While insurance penetration is measured as the percentage of insurance premium to GDP, insurance density is calculated as the ratio of premium to population (per capita premium).
- The first year premium and total premium of all the life insurance companies have increased continuously during the period 2000–2001 to 2015–2016.
- The traditional instruments are the preferred investment alternatives over the ULIPs throughout the period for the insurance companies.
- The average solvency ratio of the private companies is also higher than LIC throughout the period.
- The contribution of motor insurance is maximum to the total gross direct premium followed by health insurance across the years.
- Public sector companies' investments dominate the private sector insurance companies' investments throughout the period, but the share of private sector insurance companies has been increasing continuously.
- The average solvency ratio of the specialised insurers is higher than other types of companies throughout the period.

KEY TERMS

Insurance
Insurance Premium
Insurance Policy
Principles of Insurance
Indemnity
Life Insurance
Non-Life Insurance
Reinsurance
Asset-Liability Management
Solvency I
Solvency II
Solvency Margin
Solvency Ratio
Risk Assessment
Risk Treatment
Risk-Based Capital
Insurance Penetration
Insurance Density
Standalone Private Health Insurers
Specialised Insures

QUESTIONS

1. What is the objective of insurance? Explain the principles of insurance.
2. Explain the nature and objective of life and non-life insurance companies.
3. Highlight the risk management process of an insurance company.
4. What is solvency? Analyse the features of Solvency I and Solvency II.
5. Write a brief note on the various policy measures taken for the development of insurance industry in India.
6. Define insurance penetration and insurance density and provide a comparative analysis of both IP and ID of various countries.
7. Analyse the trends in the growth of the life and non-life insurance companies during the period of liberalisation in India.

Mutual Funds

12
CHAPTER

Learning Objectives

- **LO 1** Know Mutual Funds: advantages, disadvantages, economic growth and operation
- **LO 2** Identify key concepts related to mutual fund
- **LO 3** Understand the classification of mutual funds on the basis of operations, investment objectives and others
- **LO 4** Explain the determinants of mutual fund performance and the three ratios used for evaluating the performance of mutual funds
- **LO 5** Discuss Hedge Fund which is an alternative to mutual fund
- **LO 6** Illustrate the benefits of Systematic Investment Plan (SIP) three broad categories under which the schemes floated by mutual funds are classified

12.1 INTRODUCTION

When a student of finance comes across names such as unit trusts, investment trusts, mutual funds, mutual banks or mutual saving banks, investment companies, real estate investment trusts, trust companies, and personal trust funds, he or she may be confused. All these names, although they contain certain common words, do not refer to the type of institution we want to discuss in this chapter. *Investment trusts* (e.g. in the United Kingdom) are different from unit trusts. An investment trust is an investment-holding company and it is now being increasingly known as investment trust company. It is incorporated under the Companies Act and it has the same type of capital structure as an industrial or commercial company. Only a *unit trust* is a trust at law. Further, while unit trust is obliged to buy back units whenever an investor wants to sell them, an investment trust cannot buy back its shares and the investor in it has to sell his shares on the stock market if he wants to get rid of those shares. Similarly, while the investment trust can raise long-term debt and can retain a part of its income, the unit trust cannot do either of these things. Finally, while the stock exchange price of an ordinary share in an investment trust differs, often substantially, from the price calculated on the basis of underlying net assets, the essence of the unit trust is that there shall always be a direct relation between the value of the unit and the value of the fund (underlying assets). It is often said that while unit trust is an open-ended organisation because its fund expands or contracts continuously with the passage of time,

an investment trust is not because it can expand its capital only by issuing new shares or loan capital or by retention of its earnings. According to this criterion, while open-ended investment companies (in the United States and Canada) are similar to unit trusts, the closed-ended investment companies are different from unit trusts.

Mutual savings banks (as in the United States) are not unit trusts because their purpose and resources (deposits) are different from those of unit trusts. The 'trust companies' in Canada are also different from unit trusts for the same reason. Mutual saving banks offer both chequable and non-chequable demand accounts as well as term deposits as their claims, and their funds include retained earnings and borrowings from banks. Their basic function is professional management of funds entrusted to them by pension plans of businesses and institutions, and by trustors (through their wills). The intermediary discussed in this chapter is known as unit trusts (in United Kingdom and India) or mutual funds (in the United States, Canada and now India) or investment companies (in the United States and Canada) or investment trusts (in Japan) or unit investment trusts (in the United States). The unit trust or mutual fund is a trust at law; it is a special type of managed, pooled portfolio financial company or financial service organisation that sells shares/units/stocks in itself, to the public to obtain its resources, and it invests the savings so mobilised or pooled in a large, diversified and sound portfolio of equity shares, bonds, money market instruments and so on. In the United States, an alternative form of this institution is the Unit Investment Trust which is an unmanaged fixed-income security portfolio put together by a sponsor and handled by an independent trustee. Redeemable trust certificates are sold to investors at net asset value (NAV) plus a small commission. All interest/dividend and principal repayments are distributed to the holders of the certificates. The sponsor makes a secondary market in these certificates for those who wish to sell. The assets of the trust are almost always kept unchanged. In the case of fixed-income securities, the trust ceases to exist when the bond mature. In this chapter, we discuss the working of the Unit Trust of India (UTI) and other Mutual Funds (MFs). As it is not possible to discuss different mutual funds and their schemes individually for lack of space, it presents primarily an aggregative picture of the mutual fund industry (MFI) in India.

12.2 WHAT IS A MUTUAL FUND?

LO 1
Know Mutual Funds: advantages, disadvantages, economic growth and operation

A *Mutual Fund* is a pure intermediary which performs a basic function of buying and selling securities on behalf of its unit-holders, which the later also can perform but not as easily, conveniently, economically, and profitably. The investors in the MF are given the share in its total funds which is proportionate to their investments, and which is evidenced by the unit certificates. One of the major features of the operations of this kind of organisation is that the financial claim(s) it issues is formally almost identical with the major asset(s) it holds. Unlike other financial institutions, whose liabilities and assets differ sharply in their nature, unit trust issue claims (units) which have, like its assets (equity stock), claim on a proportionate part of the portfolio. However, unlike shareholders in a company, the shareholders in an MF do not have any voting rights. Mutual funds' special objective or advantage is that it provides investors of small and moderate means the opportunity that is enjoyed by large, rich investors namely, to realise high and secure rate of return on their savings. This is sought to be ensured by diminishing the risk of investing in stocks by spreading or diversifying investments over a large number of different kinds of stocks. Unit trust enables a small investor to hold a share in a large

and diversified portfolio of assets which reduces the risks of investment. Similarly, it makes it possible for small investors to have the benefit of professional manage.

In general, mutual funds do not guarantee the returns to the investors. In the case of a guaranteed return scheme, the particulars of the guarantor and the modality in which the guarantee shall be met must be disclosed in the offer document by the mutual fund. Investments in mutual funds are not guaranteed by the Government of India, the Reserve Bank of India or any other government body. As per the regulation of SEBI, the mutual funds are required to send the dividend warrants within 30 days of declaration of the dividend. And, the proceeds from repurchase or redemption must be dispatched within 10 working days from the date on which the request made by the unit holders for redemption.

12.2.1 Advantages and Disadvantages of Mutual fund Investments[1]

Many investors cannot directly invest in instruments such as CDs, CPs and TBs because the minimum required investment in them is quite large. They also find it almost impossible to achieve diversification through direct investment on their own because they have either limited funds to invest, or it is too expensive to do so in terms of brokerage costs. In other words, many (small) investors usually do not have adequate time, knowledge, expertise, experience and resources for directly accessing highly profitable avenues in capital and money markets. MFs confer instantaneous and substantial diversification on them, which is necessary to reduce risk. They also provide such investors continuous supervision and analysis, investment consultancy, judicious investment decision and expert, experienced, professional management of portfolio at affordable costs. Investors can typically find MFs to suit their investment outlook, tax situation, income needs and risk preferences. It is true that investors have to pay sales, management, administrative fees and transaction costs to the MFs for getting these services. Even then, the cost of investment through MFs tends to be lower than that of direct investment on their own. The retail commission or brokerage costs are generally quite hefty, and since each sale is followed by a purchase, total commission costs rise very quickly with the turnover if the investor manages his portfolio directly. In comparison, annual management and brokerage costs at MFs are quite low. This affects portfolio performance considerably in the sense that the long-term return to the investor tends to be higher if investment is made through MFs.[2] Financial institutions such as unit trusts and contractual saving organisations have a special place in the financial system for certain reasons.[3] Mutual funds provide a number of benefits in comparison to other forms and avenue of investments. This is true, particularly, where investors are having limited resources in terms of capital and do not possess adequate skills to carry out detailed research and market monitoring. The advantages of mutual fund investments are as follows:

- Mutual funds are managed by a body of professional managers who are highly experienced and posit requisite skills to manage funds efficiently. Usually, mutual funds are backed by a research team which constantly observe the market, carry out intensive analysis and suggest the fund manager for efficient portfolio management. The professional fund managers, who supervise the fund's portfolio, take desirable decisions as which securities to be bought and sold and decisions for the timing of such buy and sell. The performance of mutual fund schemes depends on the quality of fund managers employed.

[1]www.nseindia.com
[2]Jones, C P, *Investments: Analysis and Management*, Second Edition, John Wiley & Sons, New York, 1988, pp. 539–563.
[3]Henning, C N, and others, *Financial Markets and the Economy*, Prentice-Hall, New Jersey, 1978, pp. 145–49.

- Mutual funds do not invest their total fund in a specific company. Rather, they allocate their funds across industries and sectors. This happens to reduce the idiosyncratic component of individual company's risk. This is because rarely do all stocks decline at the same time and in the same proportion. In this way, investors hold a diversified portfolio even with a small amount of investment that would otherwise requires a big amount of capital.
- It reduces administrative jargons, save time and makes investing easy. Also, it helps to avoid many problems such as bad deliveries, delayed payments and unnecessary follow up with brokers and companies.
- It has been observed that over a medium to long term, mutual funds have the potential to provide a high return as they invest in a diversified basket of selected securities.
- Investors bear a low cost by investing in mutual funds as brokerage, custodial and other fees are relatively less as compared to directly investing in the capital markets.
- One of the important concerns of investor is liquidity of funds. The mutual fund schemes are found to be more liquid than other investment alternatives as there is always a market for its units. In the case of open-ended schemes, investors can always approach the fund for repurchase and get their money back promptly at Net Asset Value (NAV) related prices. Similarly, in the case of close-ended schemes, they can close their position by selling out their units on a stock exchange at the prevailing market price or avail the facility of repurchase through Mutual Funds at NAV-related prices.
- The mutual fund companies regularly disclose to investors their related value of investment, in which companies the investments made by the scheme, the proportion invested in each class of assets and the fund manager's investment strategy and outlook.
- Through features such as Systematic Investment Plans (SIPs), Systematic Withdrawal Plans (SWPs) and dividend reinvestment plans, one can systematically invest or withdraw funds according to his requirements and expediency.
- Many mutual funds cater the need of investors and allow them to switch from one fund to another according to investor's choice. For example, if investor's objective changes from capital gains to income, they can switch from growth to income funds and *vice versa*.
- Above all, they are highly regulated as it is mandatory in the part of mutual funds to get registered with SEBI and they function within the provisions of strict regulations designed to protect the interests of investors.

Though mutual funds extend a lot of benefits to the investors, however, it suffers from the following limitation or disadvantages:

- Through diversification mutual fund reduces risk, but it does not insure against any losses of funds that may occur during turmoil.
- On the one hand, diversification reduces risk; however, on the other hand, the diversification has a disadvantage of dilution. This implies that investment in a single security may double its value over a certain period whereas in a mutual fund investment the security counts only a small part.
- Despite the liquidity of mutual funds, most mutual funds (Particularly, open-ended funds) cannot be bought or sold in the middle of the trading day. One can only buy and sell them at the end of the day once current value of holdings is calculated.

- Mutual funds usually maintain large cash reserves as protection against a large number of simultaneous withdrawals. Although this provides investors with liquidity, it means that some of the fund's money is invested in cash instead of assets, which tends to lower the investor's potential return.

12.3 MUTUAL FUNDS AND ECONOMIC GROWTH

Mutual funds help ensure capital market stability by providing (i) structure, (ii) clarity, and (iii) transparency. They stimulate economic growth with important benefits in local economies, such as employment. *The Economist* said it best a few years ago when it pointed out that mutual funds are 'the biggest source of capital for companies giving small and medium-sized businesses unprecedented access to capital markets'. It also helps and empower the people giving them the opportunities to (i) save for retirement, (ii) buy a house, and (iii) finance childrens' education. The role of mutual funds is not just to provide average people with a vehicle to invest—but a vehicle to invest wisely. People realise that it is not enough simply to save. We all know that if you are not keeping up with inflation, you are falling behind. The past may have been characterised by money in the mattress, but our future depends on savings being invested broadly in the market. The key is wise investing. Wise investing understands that meeting personal goals is still more important than beating the market. Wise investors realise that when it comes to meeting long-term goals, time in the market beats timing the market.

12.4 ORGANISATION OF A MUTUAL FUND

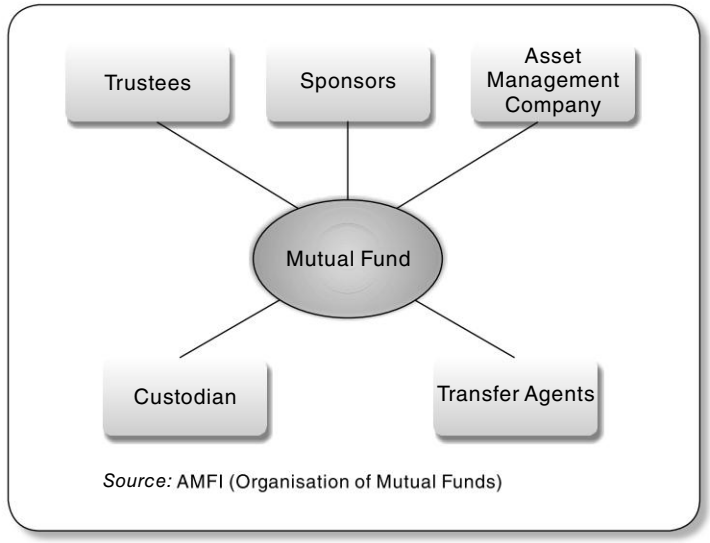


Figure 12.1 Organisation of mutual fund.

12.5 KEY CONCEPTS RELATED TO MUTUAL FUND[4]

LO 2
Identify key concepts related to mutual fund

Entry Load It is a sales charge that the investors pay when they buy some units of a mutual fund scheme. In other words, it is a charge collected by a scheme when it sells its units. This charge reduces the amount of their investment in fund. It is also called as Front-end Load or Sales Load. Schemes that do not charge a load are called 'No Load' schemes.

Exit Load It is the amount of money that the investor needs to pay to the mutual fund companies when intend to exit from a scheme. It is calculated as a percentage of NAV rather than the amount invested by investors. It is also called as 'Repurchase' or 'Back-end' Load.

Sale Price It is the price paid by investors at the time of investing in a scheme. Or in other words, it is the purchase price for investors and is also called as 'Offer Price'.

Systematic Investment Pan Like recurring deposits, it is an investment tool offered by mutual funds which helps investors to make a regular investment of small amount for a certain period of time. The frequencies of payments are usually weekly, monthly, or quarterly. It is a market-linked scheme and the return from this investment is based upon the performance of the market.

Systematic Encashment Plan This plan facilitates the investors to withdraw a specified amount or units from the invested fund at a pre-determined interval. The investor's units will be redeemed at the prevailing NAV as on that day.

Switch It is a mechanism by virtue of which investors can shift their investments from one scheme to others within that fund. Usually, to avail this facility mutual fund charges a switching fee. Through this option, the investors can shift their investments wholly or partly to another scheme based on their investment needs and risk profile.

Monthly Income Plans This is a special type of scheme where a part of fund is invested in equity and another remaining in debt. Investors who want a regular income stream invest in these schemes. The objective of these schemes is to provide regular income to the investor by paying dividends; however, there is no guarantee that these schemes will pay dividends every month. Investment in the debt portion provides for the monthly income whereas investment in the equities provides for the extra return which is helpful in minimising the impact of inflation.

Net Asset Value (NAV) In dealing with MFs, it is necessary to understand the value of their units. The NAV of the unit is an important relevant concept in this context; it is the basis for unit pricing. The NAV per unit is basically arrived at by calculating the total market value of investments or assets of the MF, subtracting liabilities and dividing by the number of units currently outstanding. Thus,

$$\text{NAV} = \frac{\text{Total market value of the assets or securities in the portfolio of the fund} - \text{liabilities}}{\text{Number of funds' units (shares) outstanding}}$$

[4]http://www.sebi.gov.in/faq/mf_faq.html

The approximate formulae used to calculate the sale and repurchase prices of units are as follows:

$$\text{Sale Price} = \frac{\begin{array}{c}\text{(Market value of the assets – liabilities excluding contingent liabilities,}\\ \text{initial share capital, reserves and unit capital) +}\\ \text{(Brokerage charges, commissions, taxes, stamp duties, other}\\ \text{management and administrative expenses)}\end{array}}{\text{Number of units outstanding}}$$

$$\text{Repurchase Price} = \frac{\begin{array}{c}\text{(Market value of the assets – liabilities excluding contingent liabilities,}\\ \text{initial share capital, reserves and unit capital) – (Brokerage charges,}\\ \text{commissions and so on.)}\end{array}}{\text{Number of units issued or outstanding.}}$$

The expected rate of return on units can be calculated as:

$$\text{RRU} = \frac{(\text{NAV}_t - \text{NAV}_{t-1}) + \text{Dividends} + \text{Capital Gains}}{\text{NAV}_{t-1}}$$

where

RRU = expected rate of return on units;

NAV = net asset value;

t = current year;

$t - 1$ = previous year.

12.6 TYPES OF SCHEMES[5]

LO 3

Understand the classification of mutual funds on the basis of operations, investment objectives and others

The schemes floated by mutual funds can be grouped into three broad categories based on their operations, investment objective, and others. Figure 12.2 presents the detailed classifications of mutual funds in India. On the basis of operations, the mutual funds are classified as open-ended, close-ended and interval funds. On the basis of investment objectives, the mutual funds are classified as growth fund, income fund, balance fund and so on. The other classifications are index fund, exchange-traded fund and so on.

12.6.1 Classification by Operations

Open-ended Fund (OEF) When the units are sold and redeemed every day or continuously on an all-going basis at the price determined by the fund's NAV, they are called OEFs. These funds have to announce their sale and repurchase prices from time to time and these prices and NAVs normally remain close to each other. There is no ceiling on the amount the investors can invest in these funds; they also have the right to sell the units back to MFs whenever they choose, and the MFs are legally bound to repurchase those units. As a result, their capitalisation or corpus changes daily. The units of such funds are perpetuities, that is without

[5]https://www.amfiindia.com/

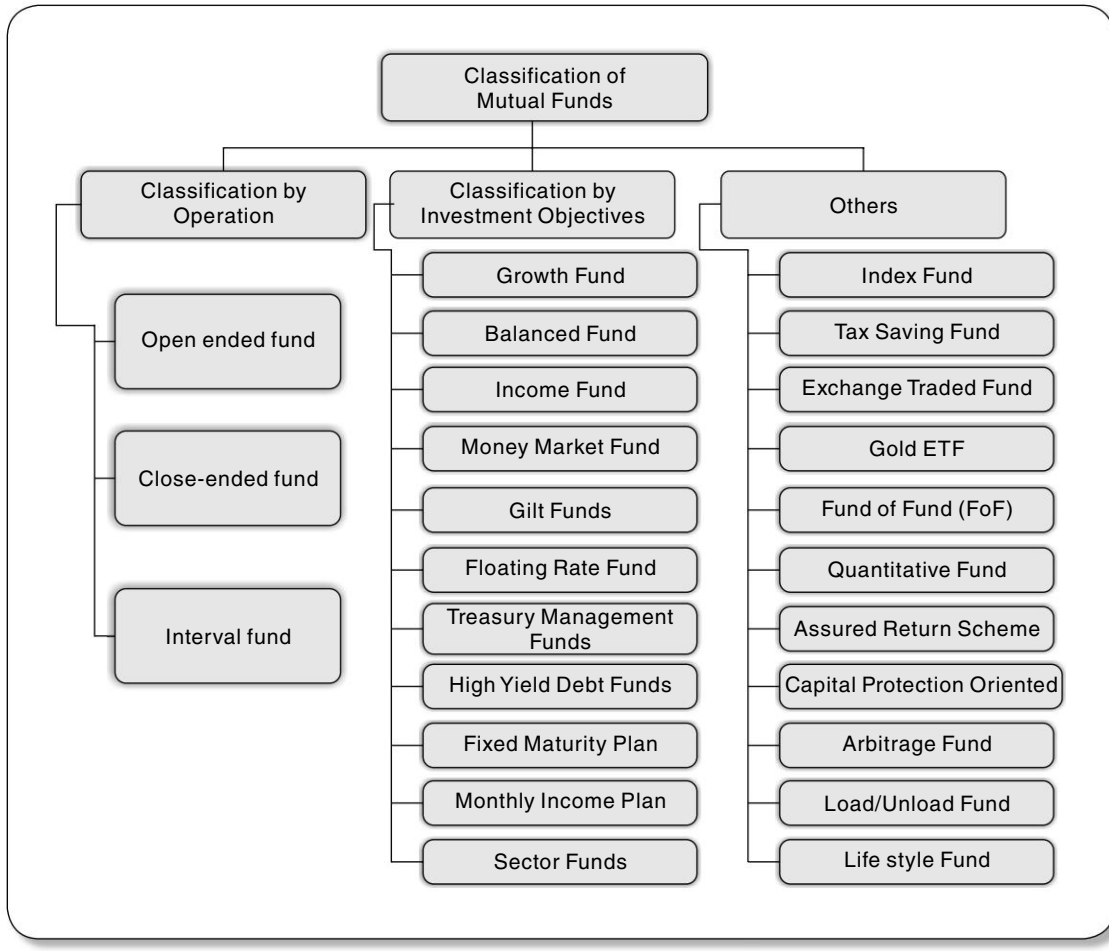


Figure 12.2 **Classifications of mutual funds in India**

any redemption date; no lock-in period, and they need not get listed on the stock markets since in their case, the investors carry out transactions directly with MFs. From this point of view, the units of OEFs differ from equity shares. OEFs have to invest a good part of their capital in the highly liquid assets in order to be ever ready to repurchase their units. In this respect, they are like banks; both of them have to remain fairly liquid and face a risk of the run on them. Usually, the investors of OEFs are assured of dividends, capital appreciation, safety, and liquidity. They are, therefore, quite popular with the investors.

Close-ended Fund (CEF) The CEFs, on the other hand, do not sell any additional units after the sale of a fixed number of units at the initial or inception stage, during a fixed period of time when the issue is open for subscription. The CEFs have a fixed time duration for their operation. Their corpus or capitalisation remains fixed or intact till their redemption, the date of which is fixed and declared at the time of issue itself. They have a lock-in period of 3–5 years and they may offer a guaranteed dividend. The units of CEFs are not

repurchased or redeemed by MFs before the termination of the period of the scheme or the lock-in period. They have to be listed on the stock markets, and can be traded only between the investors on the secondary markets, at least till the lock-in period is over. Although the investors can buy units of CEFs directly from the MFs only during the subscription period, they can acquire these units indirectly from the stock market any time. Once these units are listed, they may trade at a discount (market price < NAV) or at a premium or at NAV, but it has been found that they mostly trade at a discount. This may provide investors the chance to arbitrage the spreads especially when the redemption date is close by. The fixed capital nature of CEFs and their being listed on the stock exchanges tends to expose them to increased volatility. In practice, many CEFs in India offer a return profile which is similar to that of debentures or bonds or even deposits. The other main points of difference between the OEFs and CEFs are as follows: (i) The managers of OEFs have to be more dynamic as they have to perform a more daunting task than the managers of CEFs. If they underperform continuously, extensive redemptions can take place which can wipe out their corpus dangerously. CEFs do not face such a danger. (ii) The investors in CEFs can easily calculate the return since they know the cost of acquisition and the redemption value in advance; the investors in OEFs cannot do so because their repurchase price can vary daily. (iii) OEFs offer greater liquidity and relatively lower return than CEFs. There is a trade-off between return and liquidity while investing in these two types of funds.

Interval Fund This category of funds possesses the characteristics of both open-ended and close-ended funds. These kinds of funds either can be traded on stock exchange or may be open for sale during pre-determined intervals at NAV-related prices. Though usually interval funds are classified as closed-end funds, but they are very different from closed-end funds various ways. Unlike close-ended funds, the shares of interval funds typically do not trade on the secondary market. Rather, these funds are offered to repurchase at a price based on the net asset value. These offers are made periodically generally every 3, 6 or 12 months, as disclosed in the fund's prospectus and annual report. Interval funds are regulated under the Investment Company Act of 1940 and the rules adopted under that Act, in particular Rule 23C-3. These funds are also subject to the Securities Act of 1933 and the Securities Exchange Act of 1934. Some of the interval funds in India are Reliance interval fund, ICICI-Pru's Interval Fund II and so on.

12.6.2 Classification by Investment Objectives

The funds may also differ with respect to one another based on their objectives and the type of securities that constitute their portfolio. In this regard, the funds cater to the risk and return profile of different types of investors. The classifications of these funds are as follows:

Growth Fund It is primarily aimed at achieving capital appreciation over medium to long term. In these schemes, a higher amount of fund is invested in equity and equity linked instruments and the remaining are in debt and money market securities. Investors willing to consume a medium to higher level of risk in anticipation of a sound capital appreciation in the future usually prefer to invest in these funds. These are also known as 'nest eggs' or 'long haul' investments. Some of the prevailing growth funds in India are BNP PARIBAS Equity Fund, DWS Investment Opportunity Fund, Fidelity Equity Fund, HSBC Dynamic Fund, Quantum Long-Term Equity Fund, and so on.

Income Fund It provides regular and constant income to the investors. The portfolio of these funds primarily hold a major proportion of fixed income securities such as government securities, bonds, corporate

debentures, money market instruments, cash, and cash equivalent while at the same time, maintains a small exposure to the equity markets. Such funds are less risky as compared to equity schemes as they are not affected by the fluctuations in equity markets. Due to less investment in equity-linked schemes, the capital appreciation is limited. IDFC Capital Protection-Oriented Fund, Kotak Hybrid Fixed Term Plan, Reliance Fixed Horizon Fund, and SBI Capital Protection-Oriented Fund are a few examples in Indian context.

Balanced Fund It provides both capital appreciation and periodic returns over a long period of time. The portfolio of these kinds of funds constitutes of both equity and debt as indicated in their offer documents. Usually, a balanced fund invests 60 percent out of its net assets in equity and 40 percent in fixed income securities, money market instruments and cash. The riskiness of these funds is less in comparison to growth funds. These are also called 'income-cum-growth' funds and are ideal for investors seeking a combination of regular income and moderate growth. Some of the examples of balanced funds are HDFC Balanced Fund, UTI Balanced Fund, Tata Balanced Funds and so on.

Money Market Mutual Funds These funds invest their money in highly liquid investment avenues such as treasury bills (T-bills), certificates of deposits, commercial papers, and interbank call money. These funds provide a moderate income, higher liquidity at a low risk. Returns on these schemes fluctuate according to the interest rates prevailing in the market. It is considered to be an ideal investment for corporate as well as individual investors who want to park their surplus funds for short periods or awaiting a more favourable investment alternative. AIG India Liquid Fund, DSP Black Rock Liquidity Fund, ICICI Prudential Liquid Plan, Tata Money Market Fund, and UTI Money Market fund are some of the examples of these funds.

Gilt Funds These funds exclusively put their funds in government securities that include central government dated securities, state government securities and treasury bills. These funds endow with the investors, safety of their investments made in government securities and reaps better returns than direct investments in these securities through investing in a variety of government securities yielding a varying rate of returns. Gilt funds can be both short-term and long-term, and depending on their investment horizon, investors can choose between them. Baroda Pioneer Gilt Fund, IDFC GSF-Provident Fund, LIC, NOMURA MF Govt. Securities Fund-PF Plan, Taurus Gilt Fund, and UTI-Gilt Advantage Long-Term are some of the gilt funds in India.

Floating Rate Funds These funds focus on the securities that pay a floating rate interest such as bank loans, bonds, and other debt securities. Floating rate funds are of two types such as long-term and short-term. Short-term fund plan contains securities of shorter maturity period, with higher liquidity whereas the portfolio of long-term plan is skewed towards longer-term maturities. Unlike traditional bonds which provide a fixed rate of interest, the floating rate securities give a variable rate of interest. Depending on the particular floating rate security, the interest rate may change daily, monthly, quarterly, annually or at another specified interval. These funds provide low but stable returns. Birla Sun Life Floating Rate –Long—Term Plan, Reliance Floating Rate—Short-Term Plan, LIC Nomura Floating Rate Fund are examples of these funds.

Treasury Management Funds These funds are similar to a liquid fund and invest primarily in money market securities. Usually, these funds invest in securities whose tenure is of up to 364 days. Both the yield provided and the risk associated with these funds is slightly higher than the liquid funds. NAVs of these funds also tend to be stable due to their focus on very short-term debt. Some prevailing funds in India are DSP Chola Treasury Management Fund, Templeton Treasury Management Fund, and Tata Treasury Management Fund.

High Yield Debt Funds These funds generate a higher interest income as they park their funds in instruments having lower credit ratings. These funds are also called 'Junk Bond Funds' and are popular abroad, but not

prevalent in India. Some of the high yield bond funds are ING Pioneer High Yield Adv, Fidelity Capital & Income Fund, Credit Suisse High Yield, Wells Fargo Advantage Strategic, and so on.

Fixed Maturity Plans (FMPs) These are close-ended mutual fund schemes in which the portfolio is held till the maturity of the assets where it has invested in. Generally, these funds invest in certificate of deposits and commercial paper depending on the maturity time. They have less risk of capital loss than equity funds due to their investment in debt and money market instruments. The impact of interest rate volatility is less in these funds as they have a fixed maturity time. They are similar to Fixed Deposits, but carry lower liquidity and give superior tax advantage over them. Some of the FMPs in India are ICICI Prudential Fixed Maturity Plan, Reliance Fixed Maturity Plan, Tata Fixed Maturity Plan, and SBI Fixed Maturity Plan.

Monthly Income Plan It provides a regular income to the investors. In order to do so, these funds invest in fixed income securities to generate steady payments and distribute to the holders of the funds. A small portion of capital gets invested in equity schemes for capital gain. In a nutshell, we can say MIP is a marginal equity product, which works for conservative investors who are comfortable in investing a small component of their money in equity. MIP is a good solution for those who cannot invest in two different schemes, a bond fund and an equity fund separately on their own and rebalance their portfolio regularly as these funds not only get the asset mix right but also rebalance the portfolio from time to time. The risk profile of these funds is low to medium. DSP Black Rock Monthly Income Plan, HDFC Monthly Income Plan, IDFC Monthly Income Plan, and Reliance Monthly Income Plan are some examples of MIP funds in India.

Sector Funds These funds allocate capital in a specified sector of the economy or may be in a specified particular industry. The gain from these funds depends on the risk and return profile of the sector in which the fund is invested in. As these funds do not allow diversification, the risk is more in comparison to other well-diversified portfolio. Sector funds are suitable for investors who have already decided to invest in a particular sector or segment. Baroda Pioneer Banking and Financial Services Fund, Reliance Media and Entertainment Fund, SBI Magnum Sector Funds Umbrella-Pharma, and UTI Auto Sector Fund are some of the sector funds in India.

12.6.3 Other Funds

Apart from the above discussed mutual funds, there exist some other types of mutual funds in the market. These funds are as follows:

Index Funds These funds are designed to replicate the performance of a well-established stock market index or a particular segment of the stock market. In India, an index fund mirrors the major market index, like Nifty or Sensex as closely as possible by investing in all the stocks that comprise in proportions equal to the weightage of those stocks in the index. Unlike a typical MF, index funds do not actively trade stocks throughout the year. They may at times hold their stocks for the full year even if there are changes in the composition of index. This helps in reducing transaction fees. While reducing the risk associated with the market, index funds offer many benefits to the investors. Firstly, the investor is indirectly able to invest in a portfolio of a blue chip stock that constitutes the index. Next, they offer diversification across a multiplicity of sectors as at least 20–25 sectors find their way into the index. Added to these is the relatively low cost of management. Index funds are considered to be appropriate for conservative long-term investors looking at moderate risk, moderate return arising out of a well-diversified portfolio. A few index funds were launched in the recent past to reduce the bias of fund managers in stock selection and to provide a return at par with the

index. Some of the Index funds based on S&P CNX Nifty are UTI Nifty Fund, Franklin India Index Fund and IDBI Principal Index Fund, and so on. Templeton launched the 'Franklin India Index Tax Fund' in February 2001 which is the first tax saving index fund based on S&P CNX Nifty. There are a total of 12 funds based on S&P Nifty, namely, (a) Franklin India Index Fund, (b) Franklin India Tax Index Fund, (c) IDBI Principal Index Fund, (d) UTI Nifty Fund, (e) FT India Index Fund, (f) Magnum index fund, (g) IL&FS Index Fund Nifty Plan, (h) Prudential ICICI Index Fund Nifty Plan, (i) HDFC Index Fund Nifty Plan, (j) Birla Index Funds, (k) LIC Index Fund, and (l) Tata Index Fund. Generally, the index funds very closely track their benchmark indices. For example, Franklin India Index Fund generated a negative return of 10.69 percent over January–March 2003, which is marginally more than the negative returns generated by Nifty, that is 10.54 percent in the same period. Similarly, the other index funds based on S&P CNX Nifty also generated returns over the 3–6 month periods comparable to that of S&P CNX Nifty.

Tax Saving Funds In India, these funds offer rebates in taxes to its investors under the Income Tax Act, Section 88. Alternately, they are also called as equity-linked savings schemes (ELSS). These categories of funds usually have a lock-in-period of 3 years. Due to fixed tenor, these funds are free from the pressures of redemption, performance during a short time and so on. These funds benefit investors in several ways: firstly, it facilitates an opportunity to make investments in an avenue that is market-linked and at the same time, claim benefits in taxes. Secondly, the dividends earned in Tax Saving Funds are tax free. Some of the major Tax Saving Funds in India are Franklin India Tax Shield, HDFC Tax Saver, Sundaram Tax Saver, HDFC Long-Term Advantage, Prudential ICICI Tax Plan, Birla Equity Plan, UTI Equity Tax Savings, Tata Tax Saving Fund, and Magnum Tax Gain.

Exchange-Traded Funds (ETFs) These funds are a new variety of MF which first came into being in 1993. The ETFs are typically organised as unit trusts and are similar to index mutual funds, but are traded more like a stock. They represent a basket of securities that are traded on an exchange. Unlike OEFs, ETFs can be bought and sold like any other stock. ETF provides investors a fund that closely tracks the performance of the index with the ability to buy and sell on an intra-day basis. The first ETF in India namely, Nifty BeES, was introduced by an Asset Management Company (BENCHMARK) on 8 January, 2002. It is traded on the capital market segment of NSE. Each Nifty BeES unit is 1/10th of the S&P Nifty Index value. Nifty BeES units are traded and settled in a dematerialised form like any other share in the rolling settlement. SPICE is another ETF in India and is on SENSEX and it was launched by Prudential ICICI MF on 13 January, 2003. The price of one SPICE unit is equal to about 1/100th of SENSEX value. The scheme is listed on both Bombay Stock Exchange (BSE) and Delhi Stock Exchange (DSE). A unique feature of SPICE is said to be that it can be bought and sold like any other equity share on the BSE trading terminal (BOLT) through a stock broker. A retail investor can buy one SPICE unit for ₹33 and hold it in his Demat account just like any other security.[4] In the year 2002–2003, two ETFs were launched namely, Junior Nifty BeES based on CNX Nifty Junior, and S&P CNX Nifty UTI Depository Receipts Scheme (SUNDER) based on S&P CNX Nifty. The value of each of these ETFs is also 1/10th of the Nifty value. They are settled like any other share in T + 2 rolling settlement. In the United States, as in June 2002, about $120 billion were invested in about 230 ETFs. About 60 percent of trading volumes on the American Stock Exchange are from ETFs. Like any other index fund, ETFs are usually passively managed funds wherein subscription/redemption of units works on the concept of exchange with underlying securities. Units also can be bought and sold directly on the exchange. The ETFs are said to have all the benefits of indexing such as diversification, low cost and transparency. As the funds are listed on the exchange, costs of distribution are much lower and the reach is wider.

Gold ETFs These are exchange-traded funds that are meant to track closely the price of physical gold. Each unit of the ETF allows the investor to own 1 g of gold without physically owning it. Thus investing in a gold ETF provides the benefit of liquidity and marketability which are a limitation of possessing physical gold. As there is no physical gold transaction, owners of these funds do not bear any carrying cost. The first GETF was launched by Benchmark mutual fund as Gold BeES on 1 February, 2007. Some of the Gold Exchange-Traded Funds in India are Axis Mutual Fund-Axis Gold ETF, Gold Benchmark Exchange-Traded Scheme, Birla Sun Life Gold ETF, HDFC Gold Exchange-Traded Fund, ICICI Prudential Gold Exchange-Traded Fund, KOTAK Gold ETF, Quantum Gold Fund, Reliance Gold Exchange-Traded Fund, Religare Gold Exchange-Traded Fund, SBI Gold Exchange-Traded Fund, and UTI Gold Exchange-Traded Fund.

Fund of Fund It is a type of mutual fund scheme which instead of investing in equities, debt instruments and so on, invests in various schemes of other mutual funds. It enables double diversification; the initial diversification is achieved by the MFs which invest in various securities, and the second diversification results when FOF invests in various MFs. FOF becomes useful for those who want to invest in different MFs but do not have time or inclination to track their performance. There can be sectoral FOFs which focus on industry or geographic sector investments. FOFs are quite popular abroad. In India, SEBI cleared the proposal to set up FOF in 2003 only. Earlier, it had restricted MFs to invest in other MFs up to 5 percent of their NAV only.

Quantitative Fund It is an investment fund that selects securities based on quantitative analysis. The fund managers use some sophisticated quantitative tools and techniques to select securities while constructing portfolio. They consider the firm's performance over a long period of time and its ability to do the same in the future using a number of financial parameters such as historical data of price-to-earnings, price-to-book, company financials and other market parameters and so on. Quant-based investing strategy is considered as emotion-free. The first Quant-based Mutual Fund Scheme in India, Lotus Agile Fund opened for subscription on 25 October, 2007. At present, eight quant-based mutual funds are available in India. Out of these, four funds that is Reliance Quant plus, Religare AGILE, Canara Robeco Large Cap Plus and Edelweiss Absolute Return belong to equity-oriented category, Religare AGILE tax belongs to ELSS category, Motilal Oswal MOSt Shares M50 ETF, Motilal Oswal MoSt Shares Midcap 100 ETF, and Motilal Oswal MoSt Shares NASDAQ-100 ETF are Exchange-Traded Funds.

Assured Return Schemes These schemes assure a specific return to the investors in these funds irrespective of performance of the scheme. The return and other benefits are clearly disclosed in the offer document.

Capital Protection-Oriented Funds These funds open a new corridor of investment avenue for risk-averse investors. It carries the features of both equity and debt investment. Usually, these are closed-ended funds where a bigger chunk of money is invested in fixed income instruments and the balance is being invested in equities. These funds are suitable for investors who want to protect the downside risk and capture the upside in equities with a 3-year perspective. In developed countries, such funds offer capital guarantee with some upside participation whereas in India, these are closed-end funds that offer capital protection, without a guarantee. Axis Capital Protection-Oriented Fund, Birla Sun Life Capital Protection-Oriented Fund, JP Morgan India Capital Protection-Oriented Fund, and so on.

Arbitrage funds These funds focus to derive benefits from the price difference between cash and future derivative markets. For example, a fund may purchase equity shares in the cash market and simultaneously sell the same in the future market. Return is based on the difference in prices for same security in the two markets. The ability of

these funds to generate higher returns depends on the volatility in equity markets—the higher the better. These funds are suitable for risk-averse investors as a relatively safer option within equities. Arbitrage funds have a low risk-return trade-off and generate moderate returns. The first arbitrage fund of the Indian mutual fund industry, launched in December 2004, was the Benchmark Derivative Fund. Some of the other existing schemes of this category in India are HDFC Arbitrage Fund, Kotak Equity Arbitrage Fund, Religare Arbitrage Fund, SBI Arbitrage Opportunities Fund, and so on.

Load Fund As the term implies, this fund charges a percentage of NAV for entry in to or exit from these funds. That is, investors pay a charge each time they buy or sell units in the fund. This charge is used by the mutual fund for marketing and distribution expenses.

Life Style fund This is a special type of fund where the asset mix is determined by the level of risk and return that is appropriate for an individual investor. Several factors such as investor's age, risk appetite, investment purpose and the time duration of investment, determine the asset mix. Birla India Gennext Fund was the first lifestyle fund in India launched in June 2005. Kotak Lifestyle Fund and UTI India Lifestyle Fund are some example of the lifestyle fund in India.

12.7 DETERMINANTS OF MUTUAL FUND PERFORMANCE

LO 4

Explain the determinants of mutual fund performance and the three ratios used for evaluating the performance of mutual funds

Factors affecting expected returns include asset allocation and systematic risk, while transaction costs include explicit and implicit ones, which can be measured by expense ratios, age of the funds, fund fees, management structure, management tenure, macro-economic variables like inflation, growth rate of GDP, development of capital market, systematic risk and size of funds, respectively. Insignificance of transaction cost determinants in affecting actual returns can be attributable to dominance of factors affecting expected returns. Determinants of mutual fund performance can also be classified into factors affecting pre-tax or post-tax returns. Factors affecting pre-tax fund performance include (1) expenses, (2) investment style, (3) past pre-tax performance, (4) risk, and (5) turnover. Post-tax factors are also important as after-tax returns are much less than before-tax returns for investors in high tax brackets. These post-tax determinants include (1) past pre-tax performance, (2) expenses, (3) risk, (4) investment style, (4) past tax efficiency, and (5) recent occurrence of large net redemption. Studies on fund performance focused mainly on pre-tax factors.

12.8 MUTUAL FUND PERFORMANCE EVALUATION[6]

Generally, the performance of mutual funds is measured using three ratios that is Sharpe ratio, Treynor ratio and Jensen ratio. The assumptions behind these ratios are the following: (1) all investors are risk averse, (2) all investors have identical decision horizons and homogeneous expectations regarding investment opportunities, (3) investors portfolio selection is solely based on only two parameters that is expected returns and variance of returns, (4) there is no transaction cost and corporate tax, and (5) all assets are infinitely divisible.

[6]www.nseindia.com

Sharpe Ratio William F Sharpe has developed this ratio to measure risk-adjusted performance. It is a ratio of the excess return (subtracting the risk-free rate from the rate of return of a portfolio) to the standard deviation of the portfolio returns. The Sharpe ratio indicates whether the returns of a portfolio are due to smart investment decisions or a result of excess risk. This is very useful measure to choose a suitable fund from existing funds. For example, though one fund may yield a higher return in comparison to its peers, it is only a good investment if those higher returns do not come with too much additional risk. A higher ratio reflects a better risk-adjusted performance. This ratio measures reward to variability. A fund with higher Sharpe ratio in relation to another is preferable as it indicates that the fund has higher risk premium for every unit of standard deviation risk. Because the Sharpe ratio adjusts return to the total portfolio risk, the implicit assumption of the Sharpe measure is that the portfolio will not be combined with any other risky portfolios. The formula to calculate this ratio is

$$\text{Sharpe Ratio} = \frac{E(R_{mf}) - R_f}{\sigma_{mf}}$$

Here, $E(R_{mf})$ is the expected rate of return from a mutual fund, R_f is the risk-free rate of interest, σ_{mf} is the standard deviation of mutual fund returns. The Sharpe ratio is used to characterise how well the return of an asset compensates the investor for the risk taken. Given the same level of risk of two assets, this ratio informs us to choose the asset which gives higher expected return. As higher Sharpe ratio is an indicator of higher fund's return for every unit of risk consumed. Besides such advantages of Sharpe ratio, it suffers from a major shortcoming that is it uses the standard deviation of returns in the denominator as its proxy of total portfolio risk, which assumes that returns are normally distributed. However, empirical evidence has shown that returns on financial assets tend to deviate from a normal distribution and may make interpretations of the Sharpe ratio misleading.

Example Assume that the expected return from a mutual fund is 12 percent next year. The quoted rate of interest of T-bill is 5 percent (risk-free rate) and the volatility of the fund is 6 percent. What do you suggest about this fund?

The Sharpe ratio of this fund can be determined as

$$(0.13 - 0.06)/0.06 = 1.17$$

This means that for every point of return, the investor is bearing 1.17 'units' of risk.

Treynor Ratio This ratio was developed by Jack Treynor to measure the returns earned in excess of that which could have been earned on a riskless investment per each unit of market risk. This ratio uses systematic risk in the denominator instead of total risk as used in the case of Sharpe ratio measurement. A higher ratio is an indicator of better fund performance. This ratio indicates return per unit of systematic risk. This can be calculated as

$$\text{Treynor Ratio} = \frac{E(R_{mf}) - R_f}{\beta_m}$$

Here, $E(R_{mf})$ is the expected rate of return from a mutual fund, R_f is the risk-free rate of interest and β_m is the systematic risk. It is mainly used to rank different funds or portfolios. The ranking of portfolios based on this ratio is only useful if the portfolios under consideration are sub-portfolios of a broader, fully diversified portfolio. If this is not the case, portfolios with identical systematic risk, but different total risk, will be rated the same. But the portfolio with a higher total risk is less diversified and therefore has a higher unsystematic risk which is not priced in the market.

Jensen Ratio The Jensen measure is also suitable for evaluating a portfolio's performance in combination with other portfolios because it is based on systematic risk rather than total risk. The Jensen measure or alpha is usually very close to zero. A positive alpha means that return tends to be higher than expected given the beta statistic. Conversely, a negative alpha indicates that the fund is an under performer. Alpha measures the value-added of the portfolio given its level of systematic risk.

$$\text{Jensen Ratio} = \frac{\alpha}{\beta_m}$$

The alpha (α) can be determined using the capital asset pricing model (CAPM). Assume that

R_i = the realised return of the portfolio or mutual fund

R_m= the realised return of the market index

R_f = the risk-free rate of return for the time period

β_m = the beta of the portfolio of investment with respect to the chosen market index

$$\text{Alpha } (\alpha) = (R_i - R_f) + \beta_m(R_m - R_f)$$

Example Assume a mutual fund realised a return of 16 percent last year. The return from market index for this fund 13 percent. The beta of the fund versus that same index is 1.2 and the risk-free rate is 4 percent. The fund's alpha is calculated as

$$\text{Alpha} = 16\% - (4\% + 1.2 \times (13\% - 4\%)) = 16\% - 14.8\% = 1.2\%$$

Given a beta of 1.2, the mutual fund is expected to be riskier than the index, and thus earn more. In this example, we got a positive alpha that shows that the mutual fund manager earned more than enough return to be compensated for the risk he took over the course of the year.

12.9 STRUCTURE AND SIZE OF THE MUTUAL FUND INDUSTRY IN INDIA

Table 12.1 Number of different types of schemes of mutual funds in India, 2002–2003 to 2015–2016

Types of schemes	*Numbers (2002–2003)*	*Numbers (2006–2007)*	*Numbers (2012–2013)*	*Numbers (2014–2015)*	*Numbers (2015–2016)*
a. Income/debt-oriented schemes	202	450	857	1346	1831
(i) Liquid/Money Market	32	55	55	52	53
(ii) Gilt	31	28	42	45	41
(iii) Non-assured return debt schemes	118	367	760	1245	1730
(iv) Assured return debt schemes	21	—	—	—	—
(v) Infrastructure development	—	—	—	4	7
b. Growth/equity-oriented schemes	168	267	347	434	473
(i) ELSS	47	40	50	55	60
(ii) Others	121	227	297	379	413
c. Balanced schemes	36	38	32	25	28

(*Contd.*)

d. Exchange-traded fund	—	—	37	48	58
(i) Gold ETF			14	14	13
(ii) Other ETF			23	34	45
e. Fund of fund investing overseas			21	31	30
Grand total	**406**	**755**	**1294**	**1884**	**2420**

Source: SEBI annual report 2002–2003, 2006–2007, 2013–2014/2014–2015 and 2015–2016.

Table 12.1 shows the distribution of mutual fund schemes among various types of schemes such as income-oriented, growth-oriented and balanced schemes. Throughout the period, that is 2002–2003 to 2015–2016, the number of mutual fund schemes has increased continuously. Among the different types of schemes, the share of debt-oriented schemes has been the highest followed by the growth-oriented schemes.

Table 12.2 shows that the share of private sector mutual funds was around 97 percent in the year 2002–2003 in gross mobilisation, and it has come down to 76 percent in the year 2015–2016. The share of public sector mutual funds has increased from 2.52 percent to 19 percent during the same period. Within the types of mutual funds, the open-ended funds constitute around 99 percent. It is evident from the table that the mutual fund industry in India is dominated by the private sector mutual funds, but the importance of the public sector funds has increased. The investors in the mutual fund are more inclined towards the open-ended funds as it provides flexibility to the investor for redemption at any point of time.

Table 12.2 Gross and net resources mobilised by mutual funds through open-ended and closed-ended schemes, 2002–2003, 2006–2007 and 2015–2016

(Amount in ₹ crore)

Scheme/MF	*Gross mobilisation*			*Repurchase and redemptions*			*Net mobilisation*		
	2002–2003	*2006–2007*	*2015–2016*	*2002–2003*	*2006–2007*	*2015–2016*	*2002–2003*	*2006–2007*	*2015–2016*
Private sector MFs									
Open–ended (OE)	283632	1482588	11092349	271675	1462528	10995460	11957	20060	96889
	(97.33)	(76.48)	(80.58)	(87.49)	(79.29)	(80.66)	(285.03)	(21.34)	(42.98)
Close–ended (CE)	463	117286	33927	351	58308	39,423	112	58978	–5,496
	(0.16)	(6.05)	(0.25)	(0.11)	(3.16)	(0.29)	(2.67)	(62.75)	(–2.44)
Total	284095	1599874	11126276	272026	1520836	11034883	12069	79038	91393
	(97.48)	(82.53)	(80.83)	(87.61)	(82.45)	(80.95)	(287.70)	(84.10)	(40.54)
Public sector MFs									
Open–ended (OE)	7327.15	317570	2629048	30377	313730	2591330	229	3840	91394
	(2.51)	(16.38)	(19.10)	(9.78)	(17.01)	(19.01)	(5.46)	(4.09)	(40.54)
Close–ended (CE)	3.85	21050	10230	8106	9942	5162	–8103	11107	42651
	(0.01)	(1.09)	(0.07)	(2.61)	(0.54)	(0.04)	(–193.1)	(11.82)	(18.92)
Total	7331	338620	2639278	38483	323672	2596492	–7874	14947	134045
	(2.52)	(17.47)	(19.17)	(12.39)	(17.55)	(19.05)	(–187.7)	(15.90)	(59.46)
Total MFs									
Open–ended (OE)	290959.2	1800158	13721397	302052	1776258	13586790	12186	23900	188283
	(99.84)	(92.86)	(99.68)	(97.28)	(96.30)	(99.67)	(290.49)	(25.43)	(83.52)
Close–ended (CE)	466.85	138336	44157	8457	68250	44585	–7991	70085	37155
	(0.16)	(7.14)	(0.32)	(2.72)	(3.70)	(0.33)	(–190.5)	(74.57)	(16.48)
Grandt	314706	1938494	7267885	310509	1844509	7191346	4199	93985	76539
	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)

Notes: Figures in brackets are percentage to grand totals; UTI is added to Public sector mutual funds.
Source: SEBI annual report 2002–2003, 2006–2007, and 2015–2016.

Table 12.3 Scheme-wise resource mobilisation and assets under management by mutual funds

		Gross fund mobilised			*Repurchase/Redemption*			*Net inflow/Outflow of funds*			*Cumulative position of Net Assets as on 31st March*			*% Variation over*		
		2002–2003	*2006–2007*	*2015–2016*	*2002–2003*	*2006–2007*	*2015–2016*	*2002–2003*	*2006–2007*	*2015–2016*	*2002–2003*	*2006–2007*	*2015–2016*	*2001–2002*	*2005–2006*	*2014–2015*
A	Income/debt–oriented schemes	309672.2 (98.40)	1839669 (94.90)	13551553 (98.24)	2014091 (99.67)	1775601 (96.26)	13518544 (99.17)	5778.58 (137.77)	64067 (68.17)	33007.5 (24.60)	80911.25 (74.03)	193585 (59.33)	782,900 (63.50)	19	54.98	12.8
	(i) Liquid/Money Market	195047.14 (62.99)	1626790 (88.43)	13010039 (96.00)	1900242 (94.35)	1621805 (91.34)	12992930 (96.11)	5004.97 (86.61)	4985 (7.78)	17108 (51.83)	13734.25 (16.97)	72006 (37.20)	199,404 (25.47)	70.2	17.08	22.7
	(ii) Gilt	5201.67 (1.68)	1853 (0.10)	13158 (0.10)	5892.15 (0.29)	2816 (0.16)	12,399 (0.09)	–690.47 (–11.95)	–964 (–1.50)	759 (2.30)	3910.21 (4.83)	2257 (1.17)	16,306 (2.08)	–6.1	–28.01	11.6
	(iii) Debt (other than assured returns)	109423.37 (35.34)	211026 (11.47)	527953 (3.90)	107957.28 (5.36)	150980 (8.50)	513215 (3.80)	1464.08 (25.34)	60046 (93.72)	14738 (44.65)	63266.79 (78.19)	119322 (61.64)	565460 (72.23)	3.3	97.95	9.6
	(iv) Infrastructure development	—	—	403 (0.00)	—	—	—	—	—	402.5 (1.22)	—	—	1730 0.22	—	—	—
B	Growth/equity–oriented schemes	4639.59 (1.47)	94352 (4.87)	193763 (1.40)	4596.26 (0.23)	66145 (3.59)	91249 (0.67)	43.32 (1.03)	28206 (30.01)	74027 (55.17)	14316.26 (13.10)	123598 (37.88)	386403 (31.34)	–8.33	24.27	12
	(i) ELSS	21.58 (0.47)	4669 (4.95)	9981 (5.15)	678.9 (14.77)	216 (0.33)	3566 (3.91)	–657.33 (–1517.38)	4453 (15.79)	6415 (8.67)	1258.34 (8.79)	10212 (8.26)	41696 (10.79)	–28.8	54.99	5.6
	(ii) Others	4618.01 (99.53)	89683 (95.05)	155295 (80.15)	3917.36 (85.23)	65929 (99.67)	87683 (96.09)	700.65 (1617.38)	23753 (84.21)	67612 (91.33)	13057.92 (91.21)	113386 (91.74)	344707 (89.21)	–5.7	22.1	12.8
C	Balanced schemes	394.42 (0.13)	4473 (0.23)	28487 (0.21)	2021.93 (0.10)	2762 (0.15)	8744 (0.06)	–1627.5 (–38.80)	1711 (1.82)	19742 (14.71)	14071.86 (12.87)	9110 (2.79)	39146 (3.18)	–17	21.58	48.5
D	Exchange–traded fund	—	— —	19966.25 (0.14)	—	—	12145 (0.09)	—	—	7821 (5.83)	—	—	22409 (1.82)	—	—	58.3
	(i) Gold ETF	—	—	28.25 (0.14)	—	—	931 (7.67)	—	—	–903 (–11.55)	—	—	6346 (28.32)	—	—	–4.6
	(ii) Other ETFs	—		19938 (99.86)	—	—	11214 (92.33)	—	—	8724 (111.55)	—	—	16063 (71.68)	—	—	99.3
E	Fund of funds investing overseas	—	—	274 (Neg.)	—	—	691.10 (0.01)	—	—	–417.56 (–0.31)	—	—	1967 (0.16)	—	—	–18.3
F	Grand total (A + B + C + D + E)	314706.2 (100.00)	1938494 (100.00)	13794043 (100.00)	2020710 (100.00)	1844508 (100.00)	13631373 (100.00)	4194.4 (100.00)	93984 (100.00)	134179.9 (100.00)	109299.4 (100.00)	326293 (100.00)	1232825 (100.00)	8.7	40.73	13.9

Note: Figures in brackets are percentage to grand totals. Source: SEBI Annual Report 2002–2003, p.82, 2006–2007, p.63, 2015–2016, p.109.

Table 12.3 shows that there has been a net inflow of resources mainly through the income and debt-oriented schemes, while the growth and equity-oriented schemes have contributed a very small part to the net resources inflow in 2015–2016. Table 12.3 also shows that the share of money market (liquid), gilt and non-assured-return debt schemes in the gross funds mobilised was 96 percent, 0.10 percent and 3.9 percent, respectively, in 2015–2016. All other schemes accounted for 1.6 percent of the gross mobilisations in the year under discussion. In terms of the number of schemes, the descending order of importance of the schemes was debt schemes, others balanced, money market and gilt.

The MFs have been the net purchasers of debt securities and the net sellers of equity shares on the stock exchanges during 2000–2001 to 2015–2016. In 2015–2016, the net purchase amount was ₹1336577 crore. Throughout the period in terms of equities for some years, the MFs are net sellers and for some years they are net purchaser. In the current period, that is 2014–2016, they were the net purchasers. Overall, the transactions of the debt securities dominate the equity transactions in the stock markets in India (see Table 12.4).

Table 12.4 Transactions on stock exchanges by mutual funds

Year	*Equity (₹ in crore)*			*Debt (₹ in crore)*		
	Gross purchase	*Gross sales*	*Net purchase/sales*	*Gross purchase*	*Gross sales*	*Net purchase/sales*
2000–2001	17375.78	20142.76	–2766.98	13512.17	8488.68	900.43
2001–2002	12098.11	15893.99	–3795.88	33583.64	22624.42	10959.22
2002–2003	14520.89	16587.59	–2066.7	46663.83	34059.41	12604.42
2003–2004	30654.14	28906.97	1747.17	54076.73	32775.75	21300.98
2004–2005	45045	44597	448	62186	45199	16987
2005–2006	100436	86134	14302	109805	73004	36801
2006–2007	135948	126886	9062	153733	101190	52543
2007–2008	217578	201274	16306	298605	224816	73790
2008–2009	144069	137085	6984	327744	245942	81803
2009–2010	195662	206173	–10512	624314	443728	180588
2010–2011	154919	174893	–19975	764142	515290	248854
2011–2012	132137	133494	–1358	1116760	781940	334820
2012–2013	113758	136507	–22749	1523393	1049934	473460
2013–2014	112131	133356	–21224	1538087	994842	543247
2014–2015	231405	190687	40722	1717155	1130138	1320825
2015–2016	281334	215898	66144	1497676	1121386	1336577

Source: SEBI Annual Report, Various Issues.

As end of 2016, there were 100,494 mutual fund schemes in operation in the world with a total net assets base of US $37190 billion. The share of the United States in net assets has been around 80 percent. The share of India is very low as compared to other developed countries and emerging economies also. The US mutual fund market, with $17 trillion in assets under management as of year-end 2016, remains the largest in the world, accounting for 46 percent of the $37.2 trillion in mutual fund assets worldwide. The total net sales of mutual funds have been $1950 all over the world and maximum sales have been made by China followed by the United States in the year 2015–2016 (Table 12.5).

Table 12.6 presents the annual returns of different types of mutual funds and their comparison with the returns from other investment alternatives like equity market, savings deposit rate and fixed deposit rate of the commercial banks. In most of the years, the equity fund performance dominates over the stock market and fixed deposit returns. The money market fund, debt fund, and hybrid funds performs more or less at par with the returns from the other investment alternatives. Among the various mutual funds, the equity mutual funds perform better over other types of mutual funds in India.

Table 12.5 Worldwide net assets, number of schemes and net sales of mutual funds

Countries	*World*	*Brazil*	*United States*	*France*	*Germany*	*Italy*	*United Kingdom*	*China*	*India*	*Japan*
Total Net Assets of Mutual Fund (US $ Million)										
2001	11871028	148,189	6,974,913	713,378	213,662	359,879	316,702	N/A	15,284	343,907
2005	17771027	302,927	8,904,824	1,362,671	296,787	450,514	547,103	N/A	40,546	470,044
2008	20,631,003	479,321	10,151,925	1,591,082	1,130,972	288,354	504,681	276,303	62,805	575,327
2009	25,088,939	783,970	11,889,750	1,805,641	1,342,275	297,839	729,141	381,207	130,284	660,666
2010	27,374,359	980,448	12,825,352	1,617,176	1,389,306	248,838	854,413	364,985	111,421	785,504
2011	26,578,593	1,008,928	12,680,481	1,382,068	1,356,446	191,479	816,537	339,038	87,519	745,383
2012	30,213,561	1,070,998	14,393,789	1,473,085	1,587,390	189,937	985,517	437,449	114,489	738,488
2013	34,462,543	1,018,641	16,725,436	1,531,500	1,824,429	223,403	1,166,834	460,332	107,895	1,157,972
2014	37,072,351	989,542	17,849,645	1,940,490	1,847,268	217,363	1,501,308	708,884	136,834	1,171,974
2015	37,190,528	743,530	17,752,399	1,832,073	1,799,754	207,867	1,578,360	1,263,130	168,186	1,328,634
Number of Mutual Funds										
2001	53,371	2097	8305	7603	1077	1059	1749	N/A	297	2867
2005	56,868	2685	7975	7758	1076	1035	1680	N/A	445	2640
2008	76,519	4169	8768	8301	5633	977	2371	429	551	3333
2009	75,293	4744	8463	7982	5967	880	2266	547	590	3656
2010	77,836	5618	8478	7791	5923	823	2204	660	658	3905
2011	81,429	6513	8722	7744	5813	822	1941	831	680	4196
2012	82,410	7468	8784	7392	5868	733	1922	1065	692	4384
2013	88,747	8072	9009	7154	5905	777	1910	1415	699	7818
2014	98,832	8560	9339	11273	5509	687	2597	1763	768	8761
2015	100,494	8783	9710	11122	5604	713	2573	2558	804	9804
Net Sales of Mutual Fund (US $ Million)										
2001	904,012	N/A	623,152	91,737	19,144	–18,555	18,183	N/A	3114	–9627
2005	970,736	5293	382,400	76,441	10,557	–19,215	21,773	N/A	4914	77,458
2008	540,820	–32,653	817,413	–68,351	–1,601	–108,494	–3,506	35,721	2754	5430
2009	483,428	47,317	121,744	6164	58,262	–11,437	43,241	–35,612	43,029	32,571
2010	505,846	58,316	–6766	–110,856	99,321	–30,507	68,417	–15,115	–35,950	68,847
2011	345,087	49,995	197,553	–125,565	55,803	–41,845	13,696	27,179	532	33,028

(*Contd.*)

2012	1,223,059	56,099	575,621	–30,528	94,210	–14,247	30,567	90,505	15,832	21,526
2013	1,292,283	34,713	546,161	–99,007	110,189	16,796	26,794	–3842	2724	129,992
2014	1,794,520	1,886	559,986	–26,455	120,364	38,415	40,023	167,834	7895	97,243
2015	1,950,142	13,531	353,136	24,178	149,783	11,339	9534	470,457	33,195	233,405

Note: N/A indicates the value of that variable is not available.
Source: Investment Company Institute, European Fund and Asset Management Association and other National Fund Associations.

Table 12.6 Annual returns from various mutual funds (in percent)

Year	*Equity fund performance Index*	*Money market fund performance Index*	*Debt fund performance Index*	*Hybrid fund performance Index*	*NIFTY 50*	*SENSEX*	*NSE 500*	*Saving bank rate*	*Fixed deposit rate*
2001	–42.99	9.45	10.58	–39.44	–24.88	–27.93	–42.99	4.00	9.75
2002	6.86	7.88	17.72	8.75	–1.62	–3.75	2.83	4.00	9.38
2003	–4.54	6.79	11.20	2.91	–13.40	–12.12	–9.56	3.96	8.13
2004	119.71	4.94	8.86	44.69	81.14	83.38	107.81	3.50	5.88
2005	30.28	4.61	1.00	12.67	14.89	16.14	21.64	3.50	5.13
2006	77.83	5.44	4.21	32.62	67.15	73.73	64.16	3.50	5.25
2007	7.11	6.99	5.48	8.09	12.31	15.89	8.07	3.50	5.75
2008	22.07	8.04	8.46	13.83	23.89	19.68	21.64	3.50	7.00
2009	–37.28	8.62	10.88	–15.62	–36.19	–37.94	–40.02	3.50	7.50
2010	93.15	4.64	6.63	53.09	73.76	80.54	87.95	3.50	8.05
2011	10.06	6.24	5.32	8.93	11.14	10.94	7.26	3.50	6.13
2012	–4.36	8.90	8.78	4.54	–9.23	–10.50	–8.75	3.96	8.25
2013	5.66	9.00	10.32	7.07	7.31	8.23	5.13	4.00	9.04
2014	20.95	9.35	5.58	13.16	17.98	18.85	17.72	4.00	8.63
2015	43.78	9.04	12.47	31.05	26.65	24.89	33.56	4.00	8.08

Source: CRISIL-AMFI Mutual Fund Performance Indices, 2017.

12.10 HEDGE FUND[7]

LO 5
Discuss Hedge Fund which is an alternative to mutual fund

Hedge funds are a special type of investment vehicles, as an alternative to mutual funds, which pools funds from investors and invest in various investment avenues to earn high return. Hedge funds make use of derivatives and leverage in both domestic and international markets with the goal of generating high returns. Usually, hedge funds are accessible to only accredited investors as they require less regulatory requirements than other funds. This is one of the unique features that attract investors to invest in hedge funds. Hedge fund investors typically include high net worth individuals. These funds work

[7]http://economictimes.indiatimes.com/definition/hedge-fund

either as private investment partnerships or offshore investment corporations. Unlike mutual fund, there is no regulatory requirement to publish and disclose the NAV of the fund periodically. A hedge fund employs multiple strategies to generate returns. One such strategy is global macros, where the fund takes long and short positions in large financial markets based on the views influenced by economic trends. Sometimes, it works on market-neutral strategies. In this case, the primary objective of the fund manager is to minimise market risks by investing in long/short equity funds, convertible bonds, arbitrage funds, fixed income products, and so on. Similarly, there can be event driven fund which derives its value from the occurrences of different corporate events such as merger arbitrage funds and distressed funds. Some of the examples of prevailing hedge funds in India are Munoth Hedge Fund, Forefront Alternative Investment Trust, Quant First Alternative Investment Trust and IIFL Opportunities Fund, Singlar India Opportunities Trust, Motilal Oswal's offshore hedge fund, India Zen Fund, and so on.

12.10.1 Characteristics of Hedge Fund

- Only accredited investors can invest in hedge fund. The minimum ticket size for an investor to be a part is ₹1 crore.
- Hedge fund investment universe contains all categories of investments such as land, real estate, stocks, derivatives and currencies.
- Hedge funds employ leverage to generate a higher amount of profit.
- They charge fees for asset management as well as performance of the funds. Generally, they charge 2 percent as the asset management fee and 20 percent of the generated return as the performance fee.

12.10.2 Hedge Fund Strategies

- **Equity Market Neutral:** These categories of funds identify overvalued and undervalued equity securities and take suitable positions (long position and short position) to neutralise the portfolio's exposure to market risk. The primary goal of this strategy is to hedge against market factors by taking positions within sector, industry or market.
- **Convertible Arbitrage:** These strategies try to get the advantage from the mispricing in corporate convertible securities. These securities can be convertible bonds, warrants and convertible preferred stock. In this case, managers first buy or sell these securities and then hedge part or all of the associated risks. For example, buy a convertible bond and hedge the equity component of the bond's risk by shorting the associated stock.
- **Fixed-Income Arbitrage:** The hedge fund managers identify overvalued and undervalued fixed-income securities (bonds) primarily based upon the term structure and the credit quality. And, then take long positions and short positions in different securities to hedge against the directional market movements to make the portfolio duration close to zero.
- **Distressed Securities:** In this scheme, portfolios of distressed securities are invested in both the debt and equity of companies that are in or near bankruptcy. Traditional investors prefer to transfer those risks to others when a company is in danger of default. Furthermore, many investors are prevented from holding securities that are in default or at risk of default. Because of the relative illiquidity of distressed debt and equity, short sales are difficult, so most funds are long.

- **Merger Arbitrage:** This is also known as deal arbitrage, intends to capture the price spread between current market prices of corporate securities and their value upon successful completion of a takeover, merger, spin-off or similar transaction involving more than one company. Here, the usual strategy is to buy the stock of a target company after a merger announcement and short an appropriate amount of the acquiring company's stock.
- **Global Macro:** The primarily focus of these strategies is to derive benefits from systematic moves in major financial and non-financial markets through trading in currencies, futures and option contracts. The focus of traditional hedge fund strategies on individual security opportunities whereas in this case, the focus is on market trend. Many global macro managers use derivatives, such as futures and options, in their strategies.
- **Fund of Funds:** A fund of funds (FOF) is a fund that invests in a number of underlying hedge funds. A typical FOF invests in 10–30 hedge funds and some FOFs are even more diversified. Although FOF investors can achieve diversification among hedge fund managers and strategies, they have to pay two layers of fees: one to the hedge fund manager and the other to the manager of the FOF. FOFs are typically more accessible to individual investors and are more liquid.

Difference between Hedge Fund and Mutual Fund

- A hedge fund pools money from a group of qualified wealthy investors to invest in an array of assets such as stocks, bonds, real estate, land and so on. However, mutual fund pools money from retail investors to invest in certain specified instruments as defined by the investment objectives.
- The focus of hedge fund is on absolute return whereas the mutual funds focus on relative return. It is expected that the return should be higher than the return of benchmark fund.
- The hedge funds allocate their capital in a variety of asset classes that is equity, debt, options, futures, exotic instruments, land, real estate to name a few. On the other hand, mutual funds are restricted to invest only on assets which have been identified under different schemes.
- The regulatory requirement for hedge funds is very minimal in comparison to mutual funds. Because, mutual funds are regulated by SEBI (one of the prime objectives of SEBI is to save guard investors interest) and have to abide by the specified SEBI guidelines for investment in various assets.
- Hedge funds are less transparent and illiquid as these funds are limited to only a particular group of investors. However, it is mandatory to publish needful information that is past and current NAV, portfolio of securities where investors' money has got invested, the maturity period of the fund, performance of the fund and other details periodically and facilitate it to all.
- The hedge fund charges fee to investors for managing their assets in addition to a fee for performance on profits. In contrast, mutual funds only charge fee for managing investors' assets. The investors of hedge fund also face an adverse selection risk as all investors are not accessible to most of the market prevailing hedge funds.

12.11 SYSTEMATIC INVESTMENT PLAN (SIP)

LO 6

Illustrate the benefits of Systematic Investment Plan (SIP) three broad categories under which the schemes floated by mutual funds are classified

It is postulated and evident that assets with good fundamentals are considered to be one of the best investment avenues. For example, investment in equity stocks gives rise to phenomenal returns amongst other asset classes provided the investment was done with discipline and with long-term time horizon. This requires choosing the prospective stocks at right prices where most of the investors falter. This problem can be mitigated by investing in a systematic investment plan which takes care of the risk due to adverse selection of assets and assets pricing. An SIP is a hassle-free way to invest money in mutual funds. Under this scheme, an investor is required to invest a certain pre-determined amount at a regular interval (weekly, monthly, quarterly, and so on). It is a flexible and easy investment plan. The pre-defined amount of money will be auto-debited from the bank account in a particular time and invested into a specific mutual fund scheme. Simultaneous, based on the market value of investment (NAV), the mutual fund will allocate a certain number of units. Every time based on the amount of money invested additional units of the scheme are purchased at the market rate and added to the unit holder's account. Hence, units are bought at different rates and investors benefit from Rupee-Cost Averaging and the Power of Compounding. The financial market is volatile, most investors are worried about the best time to invest and try to 'time' their entry into the market. Rupee-cost averaging relives from the market timing. Since the unit holders' money is continuously invested in the market, hence, during volatile period, it may allow you to achieve a lower average cost per unit. One can also get the benefit of compounding to realize more wealth in the future.

12.11.1 Benefits from SIP

- Discipline is the key to successful investments. Through SIP the investors commit to make a payment at a pre-defined interval, which accumulate a lump sum wealth for future and become helpful to attain the financial objectives of the investors.
- Though it is wise to continue SIP investments with a long-term perspective, there is no compulsion. Investors can discontinue the plan at any time. One can also increase/decrease the amount being invested.
- Due to rupee-cost averaging and the power of compounding, SIPs have the potential to deliver attractive returns over a long-investment horizon.
- SIP is a hassle-free mode of investment. One can issue a standing instruction to your bank to facilitate auto-debits from your bank account.

SUMMARY

- A Mutual Fund is a pure intermediary which performs a basic function of buying and selling securities on behalf of its unit-holders, which the latter also can perform but not as easily, conveniently, economically and profitably.

- Unit trusts or mutual funds are either open-ended or close-ended financial intermediaries (trusts), which obtain their resources by selling units or shares and whose liabilities, in nature, are formally almost identical with their assets.
- They enable small investors to obtain 'high return-low risk' combination from their indirect holding of equities and other assets.
- They are either income-oriented or growth-oriented or income- and growth-oriented, and offer many other financial services such as insurance, share exchange, housing and bank loans to their investors.
- The schemes floated by mutual funds can be grouped into three broad categories based on their operations, investment objective and others.
- They may specialise in respect of using their funds; depending upon this, they may be called Common Stock Funds, Bond Funds, Balanced (Mixed) funds, Money Market Funds, and so on.
- Mutual funds help ensure capital market stability by providing (i) structure, (ii) clarity, and (iii) transparency.
- The NAV per unit is basically arrived at by calculating the total market value of investments or assets of the MF, subtracting liabilities and dividing by the number of units currently outstanding.
- Factors affecting pre-tax fund performance include (1) expenses, (2) investment style, (3) past pre-tax performance, (4) risk, and (5) turnover.
- Generally, the performance of mutual funds is measured using three ratios that is Sharpe ratio, Treynor ratio and Jensen ratio. The assumptions behind these ratios are the following: (1) all investors are risk averse, (2) all investors have identical decision horizons and homogeneous expectations regarding investment opportunities, (3) investors portfolio selection is solely based on only two parameters that is expected returns and variance of returns, (4) there is no transaction cost and corporate tax, and (5) all assets are infinitely divisible.
- Among the different types of schemes, the share of debt-oriented schemes has been the highest, followed by the growth-oriented schemes.
- It is evident from the table that the mutual fund industry in India is dominated by the private sector mutual funds, but the importance of the public sector funds has increased.
- In most of the years, the equity fund performance dominates over the stock market and fixed deposit returns. The money market fund, debt fund, and hybrid funds perform more or less at par with the returns from the other investment alternatives. Among the various mutual funds, the equity mutual funds perform better over other types of mutual funds in India.
- Hedge funds make use of derivatives and leverage in both domestic and international markets with the goal of generating high returns. Usually, hedge funds are accessible to only accredited investors as they require less regulatory requirements than other funds.
- An SIP is a hassle-free way to invest money in mutual funds. Under this scheme, an investor is required to invest a certain pre-determined amount at a regular interval (weekly, monthly, quarterly and so on.).

KEY TERMS

Investment Trust	Mutual Fund	Sales Price
Unit Trust	Entry Load	Systematic Investment Plan
Mutual Savings Banks	Exit Load	Monthly Income Plan

Net Asset Value
Open Ended Fund
Close Ended Fund
Interval Fund
Growth Fund
Income Fund
Balanced Fund
Money Market Mutual Fund
Index Fund
Sector Fund
Exchange-Traded Fund
Quantitative Fund
Sharpe Ratio
Treynor Ratio
Jenson ratio
Hedge Fund

QUESTIONS

1. What is mutual fund? Write the advantages and disadvantages of investment in mutual fund.
2. How the mutual fund affects the economic growth?
3. Briefly explain the different types of mutual funds classified based on their operations and investment objectives.
4. What are the factors affecting the mutual fund performance?
5. How the mutual fund performance is measured? Explain all the measures with suitable example.
6. Analyse the trends in resource mobilisation by the different types of mutual funds operating in India during the period of liberalisation.
7. Compare and contrast the performance of different types of mutual funds with the equity market return, saving deposits, and fixed deposit returns of the commercial banks.
8. Define the hedge fund and write down the difference between hedge fund and mutual fund.
9. Write a short note on the hedge fund strategies.
10. What is the systematic investment plan (SIP) and what are the benefits of SIP?

Miscellaneous Non-Bank Financial Intermediaries

13 CHAPTER

Learning Objectives

- **LO 1** Recognise the difference between NBFCs and banks
- **LO 2** Identify the NBFCs registered with RBI and their new regulatory framework
- **LO 3** Know more about other NBFCs which are not regulated by the RBI
- **LO 4** Understand Credit Rating objectives and the major rating agencies in India
- **LO 5** Explain the credit rating process

13.1 INTRODUCTION

The financial intermediaries discussed so far, barring the co-operative banks, are broadly characterised by public ownership, monopoly or oligopoly or monopolistic market structure and concentration or centralisation of business. The Indian financial system has another part that comprises a large number of privately owned, decentralised and relatively small-sized financial intermediaries, and which makes a more or less competitive market. While some of them are primarily engaged in fund-based activities, the others primarily provide financial services of diverse kinds. For convenience, the former may be called Non-Banking Financial Companies (NBFCs), and the latter Non-Banking Financial Services Companies (NBFSCs). This chapter is devoted to the discussion of both of these types of non-banking financial intermediaries (NBFIs).

13.2 NATURE OF NBFC AND HOW IT IS DIFFERENT FROM THE BANK

LO 1
Recognise the difference between NBFCs and banks

A **Non-Banking Financial Company (NBFC)** is a company registered under the Companies Act, 1956 engaged in the business of loans and advances, acquisition of shares/stocks/bonds/debentures/securities issued by government or local authority or other marketable securities of like nature, leasing, hire-purchase, insurance business, chit business but does not include any institution

whose principal business[1] is that of agriculture activity, industrial activity, purchase or sale of any goods (other than securities) or providing any services and sale/purchase/construction of immovable property. A *non-banking institution* which is a company and has principal business of receiving deposits under any scheme or arrangement in one lump sum or in instalments by the way of contributions or in any other manner, is also a non-banking financial company (Residuary non-banking company).

Non-Banking Financial Company (NBFC) performs a diversified range of functions and offers various financial services to individual, corporate and institutional clients. They have been helping to bridge the credit gaps in several sectors which traditional institutions such as banks are unable to fulfil. They have been playing a positive role in accessing certain depositor segments and catering to specialised credit requirements of certain classes of borrowers. They have served the household, farm and small enterprise sector on a sustained basis. A thriving, healthy and growing non-banking financial sector is necessary for promoting the growth of an efficient and competitive economy.

The resources of NBFCs are derived from deposits (regulated and exempted) and net-owned funds. Deposit means any money received by a non-banking company by way of a deposit or a loan or in any other form. Apart from usual deposits, since April-May 1993, they mean inter-corporate loans and borrowings by Private Ltd. NBFCs from their shareholders. Regulated deposit means a deposit which is subject to certain ceilings and other restrictions as imposed by the regulatory measures. It includes (a) non-convertible debentures, (b) deposits received by companies from their shareholders, (c) deposits guaranteed by directors in their personal capacity, (d) fixed deposits and so on received from the public, and (e) inter-corporate deposits. Exempted deposits signify those types of deposits/borrowings that are outside the scope of the regulatory measures. It includes (a) borrowings from banks and specified financial institutions, (b) money received from central/state/foreign governments, (c) security deposits, (d) advances received against orders, (e) convertible debentures, and so on. Net-owned fund means the aggregate of the paid-up capital and free reserves as appearing in the audited balance sheet of the company as reduced by the amount of accumulated balance of loss, deferred revenue expenditure and other intangible assets, if any, as disclosed in the balance sheet.

The differences between NBFC and bank are as follows: (i) NBFC cannot accept demand deposits; (ii) NBFCs do not form part of the payment and settlement system and cannot issue cheques drawn on itself; and (iii) deposit insurance facility of Deposit Insurance and Credit Guarantee Corporation is not available to depositors of NBFCs, unlike in case of banks. Some of the NBFCs are registered with the RBI and some of them are registered and regulated by the other regulatory bodies like SEBI and IRDA. According to RBI Act, 1934, no non-banking financial company can commence or carry on business of a non-banking financial institution without obtaining a certificate of registration from the RBI and without having net owned funds of ₹2 crore. However, certain categories of NBFCs which are regulated by other regulators are exempted from the requirement of registration with RBI *viz*. Venture Capital Fund/Merchant Banking companies/Stock

[1]Financial activity as a principal business is when a company's financial assets constitute more than 50 percent of the total assets and income from financial assets constitute more than 50 percent of the gross income. A company which fulfils both these criteria will be registered as NBFC by RBI. The term 'principal business' is not defined by the Reserve Bank of India Act. The Reserve Bank has defined it so as to ensure that only companies pre-dominantly engaged in financial activity get registered with it and are regulated and supervised by it. Hence, if there are companies engaged in agricultural operations, industrial activity, purchase and sale of goods, providing services or purchase, sale or construction of immovable property as their principal business and are doing some financial business in a small way, they will not be regulated by the Reserve Bank. Interestingly, this test is popularly known as 50-50 test and is applied to determine whether or not a company is into financial business.

broking companies registered with SEBI, insurance company holding a valid certificate of registration issued by IRDA, Nidhi companies as notified under Section 620A of the Companies Act, 1956, Chit companies as defined in clause (b) of Section 2 of the Chit Funds Act, 1982, Housing Finance Companies regulated by National Housing Bank, stock exchange or a mutual benefit company.

13.3 NBFCS REGISTERED WITH RBI[2]

LO 2

Identify the NBFCs registered with RBI and their new regulatory framework

NBFCs registered with RBI are categorized: (a) in terms of the types of liabilities into deposit and non-deposit accepting NBFCs, (b) non-deposit taking NBFCs by their size into systemically important[3] and other non-deposit holding companies (NBFC-NDSI and NBFC-ND), and (c) by the kind of activity they conduct. In terms of activities undertaken, NBFCs are classified into eight categories, *viz.*, Asset Finance Companies (AFCs), Investment Companies (ICs), Loan Companies (LCs), Infrastructure Finance Companies (IFCs), Core Investment Companies (CICs), Infrastructure Debt Fund – Non-Banking Financial Companies (IDF-NBFCs), Non-Banking Financial Company – Micro Finance Institutions (NBFC-MFIs), and NBFC-Factors. The different types of NBFCs are as follows:

13.3.1 Asset Finance Company (AFC)

Asset Finance Company is a company which is a financial institution carrying on as its principal business of financing of physical assets supporting productive/economic activity, such as automobiles, tractors, lathe machines, generator sets, earth moving and material handling equipments, moving on own power and general purpose industrial machines. Principal business for this purpose is defined as aggregate of financing real/physical assets supporting economic activity and income arising therefrom is not less than 60 percent of its total assets and total income, respectively. Since 2006, the hire-purchase financing companies and leasing services are the part of Asset Finance Companies.

Hire-purchase credit It is defined as a system under which term loans for purchases of goods and services are advanced to be fractionally liquidated through a contractual obligation. The goods whose purchases are thus financed may be consumer goods or producer goods or they may be simply services such as air travel and so on. Normally, the two terms—hire-purchase credit and instalment credit—are used synonymously. The two, however, differ technically, in that, in the case of the former the ownership of the good in question is not transferred to the buyer till he clears all dues, while in the case of the latter once the loan contract is signed the ownership is immediately transferred to the buyer. We shall also use these two terms interchangeably. Another term which is used in this context is 'consumer credit'. It is a concept with limited scope in comparison with the other two just indicated because, strictly speaking, it covers credit for financing sales and purchases of consumer goods and services only. Hire-purchase: credit may be consumer credit or commercial credit.

Hire-purchase credit may be provided by the seller himself or by any financial institution. When the seller provides such credit, his sources of funds may be his own capital or borrowings from certain financial

[2]https://www.rbi.org.in/Scripts/FAQView.aspx?Id = 92

[3]NBFCs whose asset size is of ₹500 crore or more as per last audited balance sheet are considered as systemically important NBFCs.

institutions. Different types of financial institutions such as banks and sales finance companies have now entered the business of hire-purchase finance. They may provide instalment loans against the stocks of goods of wholesale traders. Such loans are clean and unsecured advances, and, therefore tend to have a very high cost for the borrower. This method of financing sellers is not very popular. Alternatively, financial institutions may discount or purchase instalment receivables on an outright basis. This is rendered possible because instalment contracts are transferable and negotiable. In addition to financing sellers, financial institutions may finance the buyers directly. This may take either of two forms: (a) cash instalment credit under which cash is made directly available to the buyer who repays it in the form of instalments over a given period; (b) commodity instalment credit under which the buyer is allowed to purchase goods of his own choice, and a financial institution opens an account in his name and collects cash over a period of time.

Apparently, the hire-purchase credit is available in India for a wide range of products and services. Products like automobiles, sewing machines, refrigerators, TV sets, machinery and equipment, other capital goods, industrial sheds, and services like educational fees and medical fees, are now financed with the help of such credit. However, unlike in other countries, the emphasis in India is on the provision of instalment credit for productive goods and services rather than for purely consumer goods. A large part of instalment credit in India is given for the purchase of commercial vehicles. The borrowers in this market are transport operators who may be individuals, trading concerns, or a firm owning a fleet of vehicles; people belonging to middle and higher middle-income groups, small-scale industrial units, new entrepreneurs, self-employed persons, and so on.

The sources of hire-purchase finance are apparently many. First, there are hire-purchase finance companies. They are either public or private limited companies or partnership firms engaged in giving credit for the purpose of acquiring durable goods. These institutions are better organised and well-developed in South India. There are perhaps at present too many small companies doing hire-purchase finance business, and the quality of services rendered by them could be improved through consolidation. The sources of funds for these companies are mainly deposits from the public and other borrowings. Over the years, with the development of guarantee facilities, it has been made possible for these companies to borrow from banks and other institutions. If these organisations are consolidated, it should be possible for them to raise part of their resources through issuing shares also. In the recent past, banks also have increased their business in the field of instalment credit and consumer loans. It is noteworthy that banks have been able to undertake financing of sales or purchases of goods by way of instalment credit directly to buyers and sellers; it has not been possible for them to provide credit to hirers under hire-purchase contracts. Banks have been thus providing term credit to the owners of goods, or they have been re-financing finance companies and associate concerns of manufacturers. They re-finance hire-purchase financiers against the lodgement of hire-purchase agreements. In the case of commercial vehicles, banks sanction overdraft or cash credit limit against hypothecation by way of first charge in its favour on all the vehicles covered under the hire-purchase agreements executed by the hirers.

Lease Finance A lease is a financing device that has developed rapidly during the 1960s and 1970s in the US and in India just before the middle of the 1980s. It is a form of financing employed to acquire the use of assets. Through lease, firms can acquire the economic use of assets for a stated period of time without owning it. Every lease involves two parties—the user of the asset known as the lessee, and the owner of the asset known as the lessor. There are two main types of leases: (a) Operating lease, and (b) Financial or capital lease. The operating lease is a short-term lease which can be cancelled by giving proper notice at the option

of the lessee. Financial lease is a non-cancellable contractual commitment on the part of the lessee to make a series of payments to the lessor for the use of an asset. It may be cancelled only if the lessor is reimbursed for any losses. The lease payment is a fixed obligation which, if not met, will lead to financial insolvency of the lessee. The financial lease may take the following forms: (i) Sale and lease back: In this case, the firm sells an asset it owns to another party which leases it back to the former. (ii) Direct lease: Here a company acquires the use of an asset directly from the manufacturers. (iii) Leveraged lease: In this case, three parties, not the usual two, are involved in the arrangement. The three parties are the lesser, lessee, and lender. The lesser acquires the asset by part equity investment and by part borrowing on long-term basis, and the loan is secured by a mortgage of the asset as well as by the assignment of the lease and lease payments, and, if possible, by a guarantee from the lessee to the lender.

Although there may be some difference between the lease and hire-purchase credits depending upon the type of contract, in essence, both of them are quite similar. Leasing is said to be the forerunner of the growth of consumer credit business. Leasing is also a manufacturer sales-aid, a marketing device which helps the manufacturers to retain control of the market and customers. The growth of leasing or leasing industry means an increase in the number of lessors and an increase in the volume of lease business. The lessors may be equipment manufacturers or banks or specialised and independent leasing companies or finance companies or financial institutions and so on. The extent of the growth of lease business largely depends upon the legal framework and tax policy of the government.

Lease financing organisations in India include many private sector non-banking financial companies, some private sector manufacturing companies, Industrial Reconstruction Bank of India (IRBI), capital market subsidiaries of leading nationalised banks, IFC, LIC, GIC, Housing Development Finance Corporation (HDFC), certain SIDCs and State Industrial Investment Corporations (SIICs) and other organisations. The lessee companies include many leading corporations in both public and private sectors, and small manufacturing companies. The prospective entry of banks into this business is one of the major developments from the point of view of the growth of leasing business in India. The number of subsidiaries set up by banks for equipment leasing is not really large yet. But with a view to encouraging healthy growth of financial leasing equipment as an additional source of finance, the RBI has issued policy guidelines in respect of the role of commercial banks, rising of public deposits, capital issues, and import of capital goods.

13.3.2 Investment Company (IC)

Investment Company (IC) means any company which is a financial institution carrying on as its principal business the acquisition of securities. ICs are numerically the most important part of NBFCs. Their functional coverage is narrow and specialised. Most of them give loans for consumption, commerce and trading purposes. The share of industrial loans is negligible; they finance important needs as house building, education and medical needs and priority sectors as small transport operators. Many of these institutions have close local links and this puts them in a better position for the task of decentralising the financial structure of the country. The interest rates charged by these institutions for financial assistance are higher than those charged by commercial banks and other organised financial institutions. They also offer higher rates of interest on deposits accepted by them. But the higher interest rate is not the only reason why people choose them for keeping their deposits; the other reason is the possibility of borrowing funds in amounts not linked with the volume of deposits or contributions of each borrower. Similarly, they are in a position to get

loan business in spite of higher interest rates because these loans are often unsecured and the procedures are simpler while bank finance is difficult to obtain. These institutions get business because they create liabilities and assets which satisfy in a great measure non-financial preferences of lenders and borrowers. It would not be wrong to say that in such matters, these institutions form a segment within the organised financial system similar to the unorganised money market.

The question that arises is whether these institutions pose any competition for the commercial banks. There is no easy answer to this question. As these institutions do not usually accept demand deposits, they do not compete with banks in that field. With regard to time deposits, however, since the return offered by them is higher, some diversion from banks to these agencies cannot be altogether ruled out. The banking commission had pointed out that a part of their funds represents activation of currency balances. The loan business of these institutions is supplementary/complementary to that of banks. They give loans to borrowers and for purposes which are shunned or inadequately catered to by the banks. Much attention has been paid in India to the problem of regulating and controlling these institutions for two reasons. (a) Their managements have sometimes been found to be dishonest, and depositors' interests have been neglected. (b) By giving loans for the purpose of speculation and hoarding, they have tended to undermine the goals of monetary policy in the country.

13.3.3 Systemically Important Core Investment Company (CIC-ND-SI)

CIC-ND-SI is an NBFC carrying on the business of acquisition of shares and securities which satisfies the following conditions:

(a) It holds not less than 90 percent of its total assets in the form of investment in equity shares, preference shares, debt or loans in group companies;

(b) Its investment in the equity shares (including instruments compulsorily convertible into equity shares within a period not exceeding 10 years from the date of issue) in group companies constitutes not less than 60 percent of its total assets;

(c) It does not trade in its investments in shares, debt or loans in group companies except through block sale for the purpose of dilution or disinvestment;

(d) It does not carry on any other financial activity referred to in Section 45I(c) and 45I(f) of the RBI act, 1934 except investment in bank deposits, money market instruments, government securities, loans to and investments in debt issuances of group companies or guarantees issued on behalf of group companies;

(e) Its asset size is ₹100 crore or above; and

(f) It accepts public funds.

13.3.4 Loan Company (LC)

Loan Company (LC) means any company which is a financial institution carrying on as its principal business providing of finance whether by making loans or advances or otherwise, for any activity other than its own, but does not include an Asset Finance Company. Loan companies constitute the major part of the NBFCs sector, accounting for a large part of the total deposits of this sector even now. They are mostly partnership

concerns, and their operations are generally confined to a few places in India, particularly in Gujarat and Mysore. The deposits accepted by them are mainly fixed deposits, although some of them may accept call deposits also. In their effort to attract deposits, they have shown a great innovative spirit by floating schemes like prize and gift schemes, recurring deposit scheme, insurance-linked deposit scheme, and so on. It may be recalled that these schemes are very much like those introduced by banks for the same purpose. Although they offer very attractive interest rates on their deposits, the security of these deposits is very low because they are not covered by deposit insurance. In addition, unlike commercial banks, the use of resources by the companies is often not based on sound principles of banking, as a result of which the risk borne by their deposit-holders is high because the ratio between paid-up capital and deposits is often too low. Yet, people opt to keep deposits with these institutions because among other things, for the high rates of interest offered by them. The difference between interest rates offered by banks and by these corporations on one-year deposits is sometimes as large as 7–8 percent.

These institutions give loans to wholesale and retail traders, small-scale industries and self-employed persons. These loans are mainly short-term loans although they are quite often and quite easily renewed. The loans are generally unsecured, which is made possible by the institution's knowledge of local conditions and the personal credit standing of the borrowers. The rate of interest charged on these loans is equivalent to the rates charged by the money-lenders, varying between 18 and 36 percent per annum. A notable point about loans from these institutions is that they often give loans to those borrowers who have been turned down by banks, or they give loans for financing margins fixed by banks under selective credit controls, or to hoarders of scarce commodities. Thus, their operations are a threat to the working of monetary policy and to the achievement of social objectives. These institutions also provide certain other services, such as (a) discounting post-dated cheques, (b) collecting dividends for their customers, and (c) purchasing and discounting of *hundis*.

13.3.5 Infrastructure Finance Company (IFC)

Infrastructure Finance Company (IFC) is a non-banking finance company (a) which deploys at least 75 percent of its total assets in infrastructure loans, (b) has a minimum net owned funds[4] of ₹300 crore, (c) has a minimum credit rating of 'A' or equivalent, and (d) a CRAR of 15 percent. 'infrastructure loan' means a credit facility extended by NBFCs to a borrower for exposure in the infrastructure sub-sectors like transport, energy, water and sanitation, communication and social and commercial infrastructure.

13.3.6 Infrastructure Debt Fund: Non-Banking Financial Company (IDF-NBFC)

Infrastructure Debt Fund: Non- Banking Financial Company (IDF-NBFC) is a company registered as NBFC to facilitate the flow of long-term debt into infrastructure projects. IDF-NBFC raise resources through issue of Rupee or Dollar denominated bonds of minimum 5-year maturity. Only Infrastructure Finance Companies (IFC) can sponsor IDF-NBFCs.

[4]Owned Fund means aggregate of the paid-up equity capital, preference shares which are compulsorily convertible into equity, free reserves, balance in share premium account and capital reserves representing surplus arising out of sale proceeds of asset, excluding reserves created by revaluation of asset, after deducting therefrom accumulated balance of loss, deferred revenue expenditure and other intangible assets. 'Net Owned Fund' is the amount as arrived at above, minus the amount of investments of such company in shares of its subsidiaries, companies in the same group and all other NBFCs and the book value of debentures, bonds, outstanding loans and advances including hire purchase and lease finance made to and deposits with subsidiaries and companies in the same group, to the extent it exceeds 10 percent of the owned fund.

13.3.7 Non-Banking Financial Company-Micro Finance Institution (NBFC-MFI)

Non-Banking Financial Company-Micro Finance Institution (NBFC-MFI) is a non-deposit taking NBFC having not less than 85 percent of its assets in the nature of qualifying assets which satisfy the following criteria:

(a) Loan disbursed by an NBFC-MFI to a borrower with a rural household annual income not exceeding ₹1,00,000 of urban and semi-urban household income not exceeding ₹1,60,000;

(b) Loan amount does not exceed ₹50,000 in the first cycle and ₹1,00,000 in subsequent cycles;

(c) Total indebtedness of the borrower does not exceed ₹1,00,000;

(d) Tenure of the loan not to be less than 24 months for loan amount in excess of ₹15,000 with prepayment without penalty;

(e) Loan to be extended without collateral;

(f) Aggregate amount of loans, given for income generation, is not less than 50 percent of the total loans given by the MFIs; and

(g) Loan is re-payable on weekly, fortnightly or monthly instalments at the choice of the borrower.

13.3.8 Non-Banking Financial Company–Factors (NBFC-Factors)

Non-Banking Financial Company Factor is a non-deposit taking NBFC engaged in the principal business of factoring. The financial assets in the factoring business should constitute at least 50 percent of its total assets and its income derived from factoring business should not be less than 50 percent of its gross income.

Business transactions both at the retail and wholesale levels take place partly on the basis of cash and partly on the basis of credit. The buyers normally do not have to make down-payments on delivery of goods and services; the sellers allow the buyers some time before they make payments for goods received. The sellers extend credit (known as trade credit) to the buyers during this interval of time (known as net credit period) between receipt of goods and payment of cash. The dues which arise during this process of credit sales are known as trade receivables from the point of view of sellers, and trade payables from the point of view of buyers. The sellers may extend credit without demanding any legal evidence to the liability of the buyers (open account trade credit) or they may require promissory notes or trade acceptances from buyers. Although the practice of extending credit enables sellers to increase sales, it has a cost also. Therefore, the efforts of sellers are always to collect receivables as quickly as possible. In other words, receivables management occupies a significant part of the time, efforts and cost of working capital management on the part of sellers, and a good receivables management consists in reducing the collection period to the minimum without adversely affecting the sales. The sellers may make their own internal arrangements to collect receivables or they may hand over this job to a specialised collection agency. Such an agency is known as a factor in the business world.

A factor is thus a financial institution which manages the collection of accounts receivables of the companies on their behalf and bears the credit risk associated with those accounts. In general, factoring means selling, with or without recourse, the receivables by the firm to a factor. By factoring, the company relieves itself of the organisation, procedures and internal expenses of collecting its receivables. There are three main parties in factoring arrangements: (a) the factor, (b) the client (seller), and (c) the customer (buyer). The arrangements

are governed by a contract between the factor and the client, and this contract is for a fixed period, usually a year, which is normally renewed automatically. The contract can be cancelled only with sufficient prior notice. The factoring arrangement is usually continuous, that is, as the client acquires new receivables, they are sold to the factor. The customer is notified that his account has been sold to the factor and that he should send the payment directly to the factor. It now becomes the responsibility of the factor to collect receivables. For servicing the receivables and bearing the risk, the factor charges a fee which is usually a given percentage, say 1–3 percent, of the face value of receivables. As per the payment to the client, the factor may do so as the amount is collected, or he may make an advance payment. If the latter, the factor will charge an interest in addition to a fee. Factoring is an accepted and fairly well-developed financial service in the US, UK, Europe and even South America. There, it covers both national and international business. In the US and UK, this service is made available mainly by banks through subsidiaries or specialised departments. In India, such a service is not yet well-developed. But the authorities have already initiated steps to develop it. One of the problems faced by companies in India is the lengthening of the trade-credit period (the collection or payment period). The RBI has been trying to reduce this period by issuing and implementing guidelines regarding inventory and receivables norms, and new systems of bank lending referred to earlier. The development of factoring service also may be of great help in this respect.

13.3.9 Mortgage Guarantee Companies (MGC)

Mortgage Guarantee Companies (MGC) are financial institutions for which at least 90 percent of the business turnover is mortgage guarantee business or at least 90 percent of the gross income is from mortgage guarantee business and net-owned fund is ₹100 crore.

13.3.10 NBFC: Non-Operative Financial Holding Company (NOFHC)

It is a financial institution through which promoter/promoter groups will be permitted to set up a new bank. It is a wholly owned Non-Operative Financial Holding Company (NOFHC) which will hold the bank as well as all other financial services companies regulated by the RBI or other financial sector regulators, to the extent permissible under the applicable regulatory prescriptions.

13.3.11 Residuary Non-Banking Company (RNBC)

Residuary Non-Banking Company (RNBC) is a class of NBFC which is a company and has as its principal business the receiving of deposits, under any scheme or arrangement or in any other manner and not being an investment, asset financing, loan company. These companies are required to maintain investments as per directions of RBI, in addition to liquid assets. The functioning of these companies is different from those of NBFCs in terms of method of mobilization of deposits and requirement of deployment of depositors' funds as per directions. In order to secure the interests of a depositor, such companies are required to invest 100 percent of their deposit liability into highly liquid and secure instruments, namely, central/state government securities, fixed deposits with Scheduled Commercial Banks (SCB), Certificate of Deposits of SCB/FIs, units of Mutual Funds, and so on. The collection of deposits is done at the door steps of depositors through field staff who is paid a sizeable commission. These companies get the funds at low cost for longer terms, and deploy them at relatively high yields. Many of these companies operate with meagre capital. There are no

restrictions on the quantum of deposits they can raise. They have certain adverse features: (a) negative net worth in some cases; (b) not submitting periodic returns to the regulatory authority; (c) absence of designation of their banks by some of them; and (d) their mushroom growth.

13.4 NEW REGULATORY FRAMEWORK OF NBFCS REGISTERED WITH RBI

- The minimum Net Owned Fund (NOF) criterion for existing NBFCs (those registered prior to April 1999) has been increased to ₹20 million. NBFCs have been allowed till March 2017 to achieve the required minimum levels.
- In order to harmonise and strengthen deposit acceptance regulations across all deposit-taking NBFCs (NBFCs-D), credit rating has been made compulsory for existing unrated asset finance companies (AFCs) by March 31, 2016. Maximum limit for acceptance of deposits has been harmonised across the sector to 1.5 times of NOF.
- In view of the overall increase in the growth of the NBFC sector, the threshold for defining systemic significance for non-deposit taking NBFCs has been revised to 5 billion from the existing limit of 1 billion. Non-deposit taking NBFCs shall henceforth be categorised into two broad categories: NBFCs-ND (those with assets less than ₹5 billion) and NBFCs-ND-SI (those with assets of 5 billion and above¾deemed as systemically important) and regulations will be applied accordingly. NBFCs-ND will be exempt from capital adequacy and credit concentration norms while a leverage ratio of 7 has been introduced for them.
- For NBFCs-ND-SI and all NBFCs-D categories, tighter prudential norms have been prescribed¾minimum Tier I capital requirement raised to 10 percent (from earlier 7 percent in a phased manner by end of March 2017), asset classification norms (from 180 to 90 days in a phased manner by the end of March 2018) in line with that of banks and increase in provisioning requirement for standard assets to 0.40 percent in a phased manner by March 2018. Exemption provided to AFCs from the prescribed credit concentration norms of 5 percent has been withdrawn with immediate effect. Additional corporate governance standards and disclosure norms for NBFCs have been issued for NBFCs-D and NBFCs-ND.
- NBFCs with assets of less than ₹5 billion shall not be subjected to prudential norms if they are not accessing public funds and those not having customer interface will not be subjected to conduct of business regulations.
- Assets of multiple NBFCs in a group shall be aggregated to determine if such consolidation falls within the asset sizes of the two categories. Regulations as applicable to the two categories will be applicable to each of the NBFC-ND within the group. Reporting regime has been rationalised with only an annual return prescribed for NBFCs of assets size less than 5 billion.

13.5 GROWTH OF NBFCs REGISTERED WITH RBI

Table 13.1 presents the number of NBFCs registered with RBI. Over the years, the total number of companies registered with RBI has been fluctuating, but the number of deposit taking NBFCs has been declining continuously (Table 13.1). On the basis of ownership, the share of non-government companies has been more than the government companies. Within the non-government companies, the number of public limited companies dominates over the private companies (Table 13.2).

Table 13.1 Number of NBFCs Registered with RBI

Year	*NBFCs*	*NBFCs-D*
2000	8451	679
2001	13815	776
2002	14077	784
2003	13849	710
2004	13764	604
2005	13261	507
2006	13014	428
2007	12968	401
2008	12809	364
2009	12740	336
2010	12630	308
2011	12409	297
2012	12385	271
2013	12225	254
2014	12029	241
2015	11842	220
2016	11682	202

Source: RBI, RTPBI, Various issues

Table 13.2 Number of RBI Registered NBFCs on the Basis of Ownership

Items	*2009–2010*		*2010–2011*		*2011–2012*		*2012–2013*		*2013–2014*		*2014–2015*		*2015–2016*	
	NBFCs-ND-SI	*NBF-Cs-D*	*NBFCs-ND-SI*	*NBFCs-D*	*NBFCs-ND-SI*	*NBF-Cs-D*	*NBFCs-ND-SI*	*NBFCs-D*	*NBFCs-ND-SI*	*NBFCs-D*	*NBFCs-ND-SI*	*NBFCs-D*	*NBFCs-ND-SI*	*NBFCs-D*
Govt Companies	9	9	9	9	9	7	9	7	NA	NA	7	10	5	16
Non Govt Companies	258	302	310	288	366	266	409	247	NA	NA	211	190	194	193
Public ltd Companies	161	293	181	279	198	263	218	245	NA	NA	209	105	188	105
Private ltd Companies	97	9	129	9	168	3	191	2	NA	NA	2	85	6	88
Total no. of Companies	267	311	319	297	375	273	418	254	NA	NA	220	200	199	209

Source: RBI, RTPBI, Various Issues.

Table 13.3 shows that the aggregate public deposits of NBFC-D have increased over the years. Table 13.4 presents the balance sheet of both NBFC-D and NBFC-ND-SI. For both types of NBFCs among all types of liabilities, the share of borrowings has been highest followed by the reserves and surplus. For NBFC-Ds, the share of public deposits has been varying 3–16 percent. Among all the items in the assets, loans and advances constitute the largest share followed by the investments.

Table 13.3 Aggregate Public Deposit of NBFCs-D **(Amount in ₹ Crore)**

Year	*Aggregate Public Deposit*
1997–1998	13572
2002–2003	5035
2006–2007	2077
2009–2010	2831
2010–2011	4098
2011–2012	5735
2012–2013	7085
2013–2014	10808
2014–2015	28941
2015–2016	37900

Source: RBI, RTPBI, Various issues

The operating profits and net profits of both NBFCs-D and NBFCs-ND-SI have increased throughout the period. In the recent years, particularly, during 2014–2016, the NPAs of both types of NBFCs have increased (Tables 13.5 and 13.6).

13.6 OTHER NBFSCs IN INDIA

LO 3

Know more about other NBFCs which are not regulated by the RBI

All the NBFCs are not regulated by RBI. Housing Finance Companies are regulated by National Housing Bank, Merchant Banker, Venture Capital Fund are regulated by Securities and Exchange Board of India. Similarly, Nidhi Companies are regulated by Ministry of Corporate Affairs, Government of India. Companies that do financial business but are regulated by other regulators are given specific exemption by the Reserve Bank from its regulatory requirements for avoiding duality of regulation. The characteristics of some of the important NBFCs operating in India regulated by other regulatory bodies are explained as follows:

13.6.1 Housing Finance Companies

Housing is one of the basic necessities of man, and the capital required per dwelling is so large that few individuals can raise it from their own savings. There is, therefore, a great need and scope for the development of arrangements for supplying loans or finance for the purpose of house construction. However, for some reason or other, the shelter sector of the Indian financial system remained utterly underdeveloped till the

Table 13.4 Balance sheet of NBFCs **(Amount in ₹ Crore)**

Year	Balance sheet of NBFC-D								Total
	Liabilities					Assets			
	Paid up capital	Reserves and Surplus	Public Deposit	Borrowing	Other liabilities	Investments	Loans and advances	Other aseets	
2003	2860(7.6)	4745(12.6)	5035(13.4)	24480(64.9)	589(1.6)	4338(11.5)	13398(35.5)	20018(53.0)	37709
2007	2289(4.8)	5969(12.4)	2042(4.3)	32563(67.8)	5136(10.7)	7508(15.64)	10602(22.1)	29888(62.26)	47999
2010	3892(4.1)	12181(12.9)	2831(3.0)	64078(68.0)	11229(11.9)	18498(19.64)	71119(75.5)	4595(4.88)	94212
2011	3643(3.5)	13506(12.8)	4062(3.9	69816(66.2)	14404(13.7)	21102(20.0)	77901(73.9)	6428(6.1)	105431
2012	3200(2.8)	16200(13.9)	5800(5.0)	80900(69.2)	10700(9.1)	7400(6.05)	84100(68.82)	30700(25.12))	122200
2013	3700(2.9)	18200(14.58)	7100(5.68)	84700(67.9)	11100(8.89)	7200(5.77)	91800(73.55)	25800(20.67)	124800
2014	3300(1.76)	27400(14.54)	26000(13.79)	131700(69.87)	—	5800(3.07)	158500(84.12)	24100(12.8)	188400
2015	3200(1.67)	27600(14.34)	27500(14.28)	134100(69.67)	—	6900(3.73)	159000(86.08)	18800(10.17)	184700
2016	3400(1.43)	33700(14.13)	37900(15.89)	163500(68.53)	—	8500(3.56)	211700(88.68)	18500(7.75)	238700
	Balance sheet of NBFC-ND-SI								
	Liabilities				Assets				Total
	Share capital	Reserves and Surplus	Total Borrowings	Current Liability and provisions	Investment	Loans and advances	Cash and bank balances	Other Assets	
2010	33576(5.70)	111967(19.01)	381850(64.85)	36082(6.12)	98170(16.67)	350470(59.52)	25407(4.32)	89429(15.19)	588806
2011	38200(5.02)	159900(21.00)	517500(67.98)	45700(6.00)	150700(19.8)	470900(61.86)	31300(4.12)	108300(14.22)	761300
2012	50500(5.48)	190100(20.63)	639800(69.45)	40900(4.44)	159500(17.31)	590000(64.03)	35700(3.88)	136100(14.77)	921300
2013	59200(5.30)	206800(18.50)	798000(71.40)	53700(4.80)	174200(15.58)	749700(67.07)	35800(3.20)	158100(14.14)	1117700
2014	63800(5.21)	231100(18.91)	866900(70.90)	60800(4.97)	188800(15.45)	827300(67.67)	NA	206500(16.90)	1222600
2015	63000(4.87)	227100(17.58)	941100(72.84)	60800(4.71)	204200(15.81)	951600(73.65)	46300(3.58)	89900(6.95)	1292000
2016	67800(4.74)	255000(17.85)	1033500(72.34)	72500(5.07)	205200(14.36)	1070900(74.95)	43400(3.03)	109300(7.65)	1428800

Source: RBI, RTPBI, Various issues. Notes: The values in the bracket show the percentage to total

Table 13.5 Financial Performances of NBFCs (Amount in ₹ Crore)

Item/Year	*NBFCs-D*					*NBFCs-ND-SI*		
	Income	*Expenditure*	*Tax provision*	*Operating Profit*	*Net profit*	*Total Income*	*Total Expenditure*	*Net profit*
2009–2010	13615	11038	1096	2577	1482	60932	43609	12231
2010–2011	15200	10900	1400	4300	2900	75200	52900	16000
2011–2012	17900	12900	1600	5000	3300	98800	74500	17100
2012–2013	18800	13800	1600	5000	3400	127200	103900	23300
2013–2014	21700	7500	1500	5900	4300	138600	102800	25600
2014–2015	28000	11100	1900	6000	4100	147000	108400	28000
2015–2016	35500	15800	2300	7100	4800	171700	129700	29800

Source: RBI, RTPBI, Various issues

Table 13.6 NPA of NBFCs (Gross NPAs to Gross Advances) (Percentages)

Year	*NBFCs-D*			*NBFCs-ND-SI*
	Asset Finance Companies	*Loan Finance Companies*	*All Companies*	
2009–2010	0.77	2.63	1.35	2.8
2010–2011	0.50	1.3	0.7	1.72
2011–2012	2.4	1.3	2.2	2.08
2012–2013	2.7	1.5	2.4	2.20
2013–2014	3.6	1.5	3.1	4.3
2014–2015	4.1	1.7	3.5	4.3
2015–2016	6.4	2.4	4.9	4.4

Source: RBI, RTPBI, Various issues

end of the 1980s. The lack of adequate institutional supply of credit for house building was stressed as an important gap in the process of financial development in India. In the recent past, the authorities have initiated certain steps to bridge this gap. In this section, we briefly describe the existing and changing arrangements in India for providing housing finance. Finance for housing is provided in the form of mortgage loans, that is, it is provided against the security of immovable property of land and buildings. Major housing finance institutions include the commercial banks, HUDCO, LIC, GIC, and some private companies. The major institutions providing housing loans are HUDCO, HDFC, State Housing Finance Societies, LIC, and GIC.

The suppliers of house mortgage loans in India are the following: the Housing and Urban Development Corporation (HUDCO), the apex co-operative housing finance societies and housing boards in different states, central and state governments, LIC, commercial banks, GIC, and a few private housing finance companies and Nidhi's. The governments provide direct loans mainly to their employees. The participation of commercial and urban co-operative banks in direct mortgage loans has been marginal till recently. The LIC has been a major supplier of mortgage loans in indirect and direct forms. It has been giving loans for

house building to the state governments, apex co-operative housing finance societies, HUDCO, and so on. In addition, it has been providing mortgage loans directly to individuals under its various mortgage schemes. A part from the major housing finance institutions are HDFC, HUDCO, SHFSc, LIC housing finance limited, and so on.

The *Housing Development Finance Corporation Ltd. (HDFC)* has been playing an important role in meeting housing finance requirements. The HDFC was set up in 1977 out of the consideration that a specialised institution was needed to channel household savings as well as funds from the capital market into the housing sector. It works through branch and representative offices. HDFC's loans were linked up with planned saving. Given the sum needed for a house, a part of it has to be in the form of saving contribution, and the rest was given by the HDFC in the form of a loan. While the saving part was 30 percent, the loan portion was 70 percent of the cost of the house. It discontinued home saving plan scheme from March 1993 because it had become unviable. The sources of funds for the HDFC are: (a) deposits collected through various deposit schemes, (b) domestic long-term funds from commercial banks, and (c) financial institutions, long-term loans from international institutions such as the World Bank and United States Agency for International Development (USAID).

Housing and Urban Development Company (HUDCO) is an important institution in this area. It was set up in April 1970 with the specific purpose of providing loans for shelter. It has been financing housing projects located in the areas where there is a keen demand not only for houses but also for commercial and industrial sites. It has been providing mortgage loans to co-operative housing societies also. Its loans are to the extent of 60 percent of the cost of the houses, and the maturity period of its loans is in between 8 and 10 years. It may be noted that 55 percent of HUDCO loans are earmarked for economically weaker sections and low income group families. Besides, 15 percent of total loans are earmarked for rural areas. Thus, a major portion of HUDCO lending is at subsidised rates of interest.

The *State Housing Finance Societies (SHFSs)* constitute another major source of funds in the residential mortgage market. These societies advance loans to the affiliated primary co-operative housing societies for the construction of dwelling houses, purchase of land, additions and improvements to existing houses, purchase of houses and repayment of earlier mortgage debt. The terms and conditions of loans vary somewhat from state to state; they also vary with the location of the house, the borrower's income group and the purpose of loan within the state. The maximum amount of a loan varies between 65 and 80 percent of the value of land and buildings, or some specified maximum amount, whichever is lower. The amount of loan is also linked with the primary society's shareholding in the apex society. The maturity period varies from 15–30 years, but 20–25 years is more common. The rate of interest charged is linked with the bank rate, and/or the respective society's own borrowing rate. In most cases, the rate charged is the bank rate plus 3 percent or the borrowing rate plus 1–3 percent. The mortgages are annuity mortgages with equal monthly or quarterly instalments of re-payment during the life of the mortgage. However, sometimes half-yearly or annual instalments are also made. The major sources of funds for these institutions are: (a) investment in their share capital by the government and co-operative institutions; (b) loans from the government and LIC; (c) fixed deposits from individuals and institutions; and (d) issues of debentures guaranteed by the government.

The regulator of housing finance companies is the *National Housing Bank (NHB)*. There are 65 housing finance companies that are registered with NHB. All institutions registered with NHB are divided into four categories (i) Housing Finance Companies, (ii) Scheduled Commercial Banks, (iii) Regional Rural Banks,

and (iv) Co-operative Banks. The detailed discussion on NHB is provided in Chapter 14. The housing finance data received from Public Sector Banks and Housing Finance Companies have shown an increase of 18.73 percent on outstanding individual housing loan figures that is from ₹6,72,556 crore as on March 31, 2014 to ₹7,98,503 crore as on March 31, 2015. Individual housing loans disbursed by 26 PSBs during 2014–2015 and the outstanding figure as on March 31, 2015 have shown an annual growth of 13.74 and 17.56 percent, respectively. Compared to these individual housing loans disbursed by HFCs, during 2014–2015 and outstanding figure as on March 31, 2015 have shown an annual growth of 16.82 and 20.20 percent, respectively. Contrary to the declining year-on-year outstanding housing loans growth rate of 2.67 percent observed in PSBs, increasing year-on-year growth rate of 1.02 percent was observed in HFCs.[5]

Highlights of *Pradhan Mantri Awas Yojana* – Housing for All (Urban): Credit Linked Subsidy Scheme

1. Credit linked subsidy would be available for housing loans availed for new construction and addition of rooms, kitchen, toilet and so on to existing dwellings as incremental housing.
2. The carpet area of houses being constructed under this component of the mission should be up to 30 and 60 m^2 for Economically Weaker Section (EWS) and Low Income Group (LIG), respectively in order to avail of this credit linked subsidy. The beneficiary, at his/her discretion, can build a house of larger area but interest subvention would be limited to first 6 lakh only.
3. Interest subsidy will be credited upfront to the eligible beneficiaries through lending institutions resulting in reduced effective housing loan and equated monthly instalment.

   Primary Lending Institutions (PLIs) defined in the said guidelines, include Scheduled Commercial Banks, Housing Finance Companies, Regional Rural Banks, State Cooperative Banks, Urban Cooperative Banks or any other institutions as may be identified by the Ministry of Housing and Urban Poverty Alleviation (MoHUPA).
4. Beneficiaries of EWS and LIG seeking housing loans from PLIs would be eligible for an interest subsidy at the rate of 6.5 percent for tenure of 15 years or during tenure of loan whichever is lower. The net present value of the interest subsidy will be calculated at a discount rate of 9 percent. For identification as a EWS or LIG beneficiary under the scheme, an individual loan applicant will submit self-certificate/affidavit as a proof of income.
5. A beneficiary family will comprise husband, wife and unmarried children. The beneficiary family should not own a pucca house (an all-weather dwelling unit) either in his/her name or in the name of any member of his/her family in any part of India.
6. Preference under the Scheme, subject to beneficiaries being from EWS/LIG segments, should be given to manual scavengers, women (with overriding preference to widows), persons belonging to scheduled castes/scheduled tribes/other backward classes, minorities, persons with disabilities and transgender.

[5]NHB, Annual Report, 2014-15.

13.6.2 Merchant Banks (MB)[6]

The range of activities of merchant banks (MBs) is very wide indeed. The merchant banks are also known as 'accepting and issuing houses' in the UK and as 'investment banks' in the US. They offer a package of financial services and finance, but provide more of the former. They are said to be at the centre of capital market operations. Unlike in the past, their activities are now primarily non-fund based. Therefore, they require capital but not much. The amount of capital is neither the correct measure of the size of their activities nor of their influence, prestige and effectiveness. One of the basic requirements of merchant banks is a highly professional staff with skills and world-wide contacts. Merchant banking is usually international in character.

It would help in understanding the nature of merchant banking if we compare it with commercial banking. The MBs offer mainly financial advice and services for a fee, while commercial banks accept deposits and lend money. When MBs do function as commercial banks, they function essentially as wholesale bankers rather than retail bankers. It means that they deal with selective large industrial clients and not with the general public in their fund-based activities. The MBs are different from securities dealers, traders and brokers. They deal mainly in new issues, while the latter deal mainly in existing securities. The MBs are engaged more in broking than in banking business. They arrange funds or negotiate financial deals for their clients for a fee as 'arrangers', 'brokers', or 'intermediaries'.

The basic function of merchant banks is marketing corporate and other securities, which is guaranteeing sales and distribution of securities. All aspects—origination, underwriting and distribution of the sale of industrial securities are handled by them. They are experts and good judges of the type, timing and terms of issues and make them acceptable to investors under prevailing preferences and market conditions, and at the same time afford the borrowing company the freedom and flexibility it needs to meet possible future contingencies. They guarantee the success of issues by underwriting them. Then they provide all the services related to receiving applications, allotment, collecting money, sending share (debenture) certificates, and so on. The merchant banker does not normally assume all the risk himself while underwriting the issue. There is usually the practice of forming a syndicate (short-term joint venture) of a group of merchant bankers to sell different issues.

MBs offer services not only to those who raise money (borrowers) but also to the investors. The range of activities undertaken by merchant banks is much wider than sponsoring public issues of industrial securities. A recent advertisement of one of the merchant bankers mentioned the following as its range of activities or services: (i) Management, marketing and underwriting of new issues, (ii) project promotion services and project finance, (iii) syndication of credit and other facilities, (iv) leasing including project leasing, (v) corporate advisory services, (vi) investment advisory services, (vii) bought-out deals, (viii) venture capital, (ix) mutual funds and offshore funds, (x) investment management including discretionary management, (xi) assistance for technical and financial collaboration and joint ventures, (xii) investment services for non-resident Indians, and (xiii) management of and dealing in commercial papers. In India, the merchant banking services are provided by the commercial banks, all India financial institutions and private companies. The Reserve Bank of India (RBI) has exempted merchant banking companies from the provisions of RBI Act, 1934, relating to compulsory registration (section 45IA), maintenance of liquid assets (sections 45IB), creation of reserve fund (section 45IC) and all provisions of the recent directions relating to deposit acceptance and prudential norms.

[6]Based on Robinson, R I, and Wrightsman, D, *Financial Markets, op. cit.,* pp. 268–71 and 359–61; Edmister, R O, *Financial Institutions, op. cit.,* pp. 250–61; and Nayar, Laxmi, 'A Preliminary Study on Merchant Banking' (unpublished).

Securities and Exchange Board of India (SEBI) will grant recognition a merchant banker after taking into account the following aspects: (1) considering how much the merchant are professionally competent, (2) Whether they have adequate capital**,** (3) Track record, experience and general reputation of merchant bankers, and (4) Quality of staff employed by merchant bankers, their adequacy and available infrastructure are taken into account. Securities and Exchange Board of India (SEBI) has made the following guidelines for the merchant banker:

- Multiple categories of merchant banker will be abolished and there will be only one equity merchant banker.
- The merchant banker is allowed to perform underwriting activity. For performing portfolio manager, the merchant banker has to seek separate registration from SEBI.
- A merchant banker cannot undertake the function of a non-banking financial company, such as accepting deposits, financing others' business, and so on.
- A merchant banker has to confine himself only to capital market activities.
- SEBI gives authorization for a merchant banker to operate for 3 years only. Without SEBI's authorization, merchant bankers cannot operate.
- The minimum net worth of merchant banker should be ₹1 crore.
- Merchant banker has to pay authorization fee, annual fee and renewal fee.
- All issue of shares must be managed by one authorized merchant banker. It should be the lead manager.
- The responsibility of the lead manager will be clearly indicated by SEBI.
- Lead managers are responsible for allotment of securities, refunds, and so on.
- Merchant banker will submit to SEBI all returns and send reports regarding the issue of shares.
- A code of conduct for merchant bankers will be given by SEBI, which has to be followed by them.
- Any violation by the merchant banker will lead to the revocation of authorization by SEBI.

Securities and Exchange Board of India has classified the merchant bankers into four categories based on the nature and range of the activities and the responsibilities.

Category I: It consists of merchant bankers who carry on the business of issue management which consists of preparation of issue management and prospectus, determining the financial structure, tie-up of the financiers and final allotment/refund of subscription and to act in the capacity of managers, advisors or consultants to an issue, portfolio manager and underwriter. Minimum net worth required is ₹1 crore.

Category II: It consists of those authorized merchant bankers who act with the capacity of co-manager/ advisor, consultant or underwriter to an issue. The minimum net worth required is ₹50 lakhs.

Category III: It consists of those authorized merchant bankers who act as underwriter, advisor or consultant to an issue. The minimum net worth required is ₹20 lakhs.

Category IV: It consists of merchant banker who acts as an advisor or consultant to an issue. There is no minimum net worth required.

13.6.3 Venture Capital Funds (VCF)

This is a new type of financial intermediary which emerged during the 1970s in the US, in the early 1980s in the UK, in the mid-1980s in Japan and Canada and around 1987 in India. Its growth has been quite fast

and people now talk of 'venture capital industry' or 'venture capital market' comprising a large number of Venture Capital Funds (VCFs). The term 'venture capital', is evocative and suggestive but vague. It suggests taking risk in supplying capital. However, supply of risk capital may not be the prime function in certain cases; the emphasis may be on supporting technocrats in setting up projects, or on portfolio management. Moreover, every supply of capital involves taking risk. Let us, therefore, try to clarify the meaning of this term by referring to its uses and scope of activities. The term venture capital fund is usually used to denote mutual funds or institutional investors that provide equity finance or risk capital to little known, unregistered, highly risky, young and small private businesses, especially in technology-oriented and knowledge-intensive businesses or industries that have long development cycles and that usually do not have access to conventional sources of capital because of the absence of suitable collateral and the presence of high risk. The VCFs play an important role in supplying management and marketing expertise also to such units. The list of assisted industries may vary but electronics, chemicals, plastics, biotechnology, medical care and so on are the usual examples. In a nutshell, venture capital funds are about high risk, high profitability, high and new technology, and young, first-generation, small entrepreneurs.

The question that needs to be answered is whether the VCFs supply any capital/services to existing companies. It would appear that it is so in the UK. A distinction is made there between venture capital and development capital, the latter being an investment in mature businesses. In the US, such a distinction is not always made. There, the VCFs provide seed capital and development capital for new enterprises, and development capital to established enterprises.

Broadly speaking, therefore, the scope of activities of VCFs includes provision of (a) seed capital for industrial start-ups, (b) additional capital to new businesses at various stages of their growth, (c) bridge finance, (d) equity financing or leverage buy-out financing to management groups for taking over other companies, (e) capital to new entrepreneurs in foreign operations, and (f) capital to mature enterprises for expansion, diversification and restructuring.

The form of investments of VCFs varies from company to company, but they are usually characterised by substantial control over management decisions, some protection against downside risk and a share in capital appreciation. Typical VCFs have a seat on the company's board of directors. They aim at realising high capital gains by selling the equity invested in the venture at a later stage. The corporate venture capitalists may also aim at other benefits such as access to new technologies and markets.

Although VCFs provide common equity capital, the popular vehicle of their investments may be convertible preference share capital. In general, they are less likely to provide debt capital. But if they do, it would usually be combined with equity features such as warrants, convertibility into common stock, voting rights, and so on. Venture capital is a high risk-high return business. The high risk is due to the fact that projects are untested and are undertaken by novices. The targeted long-term returns from venture capital investments are naturally high. It is said that while financing start-ups, common profit targets are 'triple the money in three years' or 'multiply money seven times in 5 years' or 'earns a compound annual rate of return of 48 percent', in second stage financing, the rate of return of 35–40 percent may be expected annually, while in third stage financing, the rate expected may be 25 percent per annum. Venture capital investment is necessarily a long-term investment. The funds are usually expected to be tied up for 3–10 years. The suppliers of venture capital usually fall in these categories: (a) subsidiaries of large financial corporations (institutions) and banks, (b) private independent specialised firms, (c) publicly funded small business investment corporations, and (d) subsidiaries or divisions of large manufacturing corporations.

Venture Capital in India governs by the SEBI Act, 1992 and SEBI (Venture Capital Fund) Regulations, 1996. According to which, any company or trust proposing to carry on activity of a Venture Capital Fund shall get a grant of certificate from SEBI. However, registration of Foreign Venture Capital Investors (FVCI) is not obligatory under the FVCI regulations. Venture Capital Funds and Foreign Venture Capital Investors are also covered by Securities Contract (Regulation) Act, 1956, SEBI (Substantial Acquisition of Shares and Takeover) Regulations, 1997, SEBI (Disclosure of Investor Protection) Guidelines, 2000.

A foreign venture capital investor proposing to carry on venture capital activity in India may register with the Securities and Exchange Board of India ('SEBI'), subject to fulfilling the eligibility criteria and other requirements contained in the SEBI Foreign Venture Capital Investor Regulations. The SEBI Foreign Venture Capital Investor Regulations prescribe the following investment guidelines, which can impact overall financing plans of foreign venture capital funds.

(a) The foreign venture capital investor must disclose its investment strategy and life cycle to SEBI, and it must achieve the investment conditions by the end of its life cycle.

(b) At least 66.67 percent of the investible funds must be invested in unlisted equity shares or equity linked instruments.

(c) Not more than 33.33 percent of the investible funds may be invested by way of:
- Subscription to initial public offer of a venture capital undertaking, whose shares are proposed to be listed.
- Debt or debt instrument of a venture capital undertaking in which the foreign venture capital investor has already made an investment, by way of equity.
- Preferential allotment of equity shares of a listed company, subject to a lock-in period of one year.
- The equity shares or equity linked instruments of a financially weak or a sick industrial company (as explained in the SEBI FVCI Regulations) whose shares are listed.
- A foreign venture capital investor may invest its total corpus into one venture capital fund.

13.6.4 Mutual Benefit Financial Companies (Nidhi Companies)

A Nidhi company notified under section 620-A of the Companies Act is classified at present as 'Mutual Benefit Financial Company' by RBI and regulated by the Bank for its deposit taking activities and by DCA for its operational matters as also the deployment of funds. These companies enjoy exemption from core provisions of the RBI Act *viz*. requirement of registration, maintenance of liquid assets and creation of reserve fund and RBI directions except those relating to interest rate on deposits, prohibition from paying brokerage on deposits, ban on advertisements and the requirement of submission of certain returns. Such companies, however, are allowed to deal with their shareholders only, for the purpose of accepting deposits and making loans. These companies shall be required to have net owned fund of ₹25 lakh by December 31, 2002 like companies already declared as *Nidhis*. Government has also clarified that NOF shall have the same meaning as assigned to it in the RBI Act, 1934. Thus a new class of companies has been created, that is the potential *Nidhi* companies. To distinguish them from the notified *Nidhi* companies (Mutual Benefit Financial Companies), the term Mutual Benefit Companies (MBC) is being used. Since the notified *Nidhi* companies are exempted from the provisions of Section 45-IA (Compulsory Registration with RBI), Section 45-IB (Maintenance of Liquid Assets) and Section 45-IC (Creation of Reserve Fund), it has been decided on the

lines of government advice to exempt the MBCs in existence as on January 9, 1997 and having NOF of ₹10 lakh from the above mentioned provisions of the Act in terms of powers vested with the Bank under Section 45 NC of the Act and also from those provisions of NBFC directions on acceptance of public deposits and prudential norms which do not apply to notified Nidhi companies.

The main function of *Nidhis* is to advance loans to their members for house construction or repairs, marriages, redemption of old debts, meeting medical expenses, and so on. Thus, the loans of these institutions are mainly for consumption. These loans are usually secured loans, given against the security of tangible assets such as house property, gold, jewellery or against shares of companies, LIC policies, fixed deposits, and so on. The terms on which loans are given are quite moderate. The notable points about these institutions are: (a) They offer saving schemes which are linked with assurances to make credit available when required by savers; (b) They make credit available to those whom commercial banks may hesitate to give credit or whom commercial banks are not able to reach; (c) They possess characteristics such as their local character, easy approachability and the absence of cumbersome procedures, which make them suitable institutions for small areas; and (d) Interest rates on their deposits and loans are comparable to those of commercial banks, and they work on sound principles of banking. Their operations are similar to those of unit banks.

13.7 CREDIT RATING AGENCY

LO 4

Understand Credit Rating objectives and the major rating agencies in India

A *credit rating agency* is a company which rates the debtors on the basis of their ability to pay back the debt in timely manner. They rate large scale borrowers, whether companies or governments. It is usually the effort of investors in financial instruments to minimise or eliminate default risk. *Credit Rating (CR)* service is useful to them in designing strategies for this purpose. It can be defined as an act of assigning values to credit instruments by estimating or assessing the solvency, that is the ability of the borrower to repay debt, and expressing them through pre-determined symbols. It is an assessment of the credit quality or investment quality of a particular credit instrument issued by a given business unit. The following definitions of CR indicate towards the same meaning of CR: (i) Credit rating is designed exclusively for the purpose of grading bonds according to their investment quality. (ii) Corporate or municipal debt rating is a current assessment of the credit worthiness of the obligator with respect to a specific obligation. (iii) A corporate credit rating provides lenders with a simple system of gradation by which the relative capacities of companies to make timely re-payment of interest and principal on a particular type of debt can be noted. The higher the rating the greater the likelihood, that the borrower will fulfil his obligations towards the creditors.

In order to know the meaning of CR, it is useful to know what it is not. Credit rating is not a recommendation to purchase or sell or hold security. It is not a general purpose evaluation of the company. It does not create a fiduciary relationship between the credit rating agency (CRA) and the rating users. It does not imply that the CRA performs an audit function or attests the veracity of information provided by the borrowers. It is not a one-time evaluation of risk which remains valid for the entire life of the security.

Credit rating is done by specialised, expert, reputed and accredited institutions. It is mostly confined to debt instruments, but efforts have been made to rate equity shares also. In Credit Rating, although the whole organisation is not graded, it does reflect the issuer's strength, soundness of operations, quality of management, organisational behaviour and composite performance. Credit rating may differ for different

instruments issued by the same organisation because of the different nature of obligations each instrument has. Usually, the CRA undertakes the job of rating an instrument on a request by the organisation issuing that instrument. However, once it has rated an instrument, it becomes its obligation towards investors to periodically announce the deterioration improvement in the grade of that instrument, whether the issuer wants it or not. Unsolicited CR also exists abroad. While assigning ratings, CRAs take into account factors such as industry risk, market position, operating efficiency, track record, planning and control systems, accounting quality, financial flexibility, profitability, liquidity and asset quality of the borrower. Credit rating is based on information provided by the borrower and the one obtained by CRA independently. After they are assigned, ratings are continuously monitored by CRA, and they can be changed, suspended and withdrawn by it at any time as a result of new information or other circumstances. The practice of 'country rating' or 'sovereign rating' as well as 'debt instruments rating' has become more common in the recent past. It is worth noting that while in the case of domestic borrowers, only the instruments are rated; in the case of country ratings, the whole country or nation is rated which is against the basic tenet of CR.

13.7.1 Objectives of Credit Rating

Although the basic objective of CR is to provide superior and low-cost information to investors for taking a decision regarding risk-return trade-off, it helps other market participants also in many ways: (a) It imposes a healthy discipline on borrowers. (b) It lends greater credence to financial and other representations. (c) It facilitates formulation of public guidelines on institutional investment. (d) It helps merchant bankers, brokers, regulatory authorities and so on in discharging their functions related to debt issues. (e) It encourages greater information disclosure, better accounting standards, and improved financial information, which, in turn, help in investor protection. (f) It may reduce interest costs for highly rated companies. (g) As a marketing tool, it is of great help to the issuer.

Credit ratings guide the investors, but they may also serve to misguide them, which depend on both the expertise and honesty of CRAs. Credit rating is a science as well as an art. It has been rightly pointed out that rating is not and never will be a precise science; there are simply too many variables or a tremendous variety and combination of business conditions to be judged. Therefore, there is no magic formula for arriving at CR; it involves matters of judgement, not merely an analysis of statistics. Subject to this, the usefulness of CR depends upon the quality of CRA, its independence from industrial concerns, absence of its vested interest in or linkages with the issuer of securities, its objectivity, the quality of its staff, and so on.

13.7.2 Credit Rating Agencies in India

The major rating agencies in India registered with SEBI are: Credit Rating Information Services of India Ltd. (CRISIL), Investment Information and Credit Rating Agency of India Ltd. (ICRA), Credit Analysis and Research Ltd. (CARE), Brickwork Ratings India Private Limited (BWR), and SME Rating Agency of India Ltd. (SMERA).

Credit Rating Information Services of India Ltd. (CRISIL)

It was set up in January 1988 jointly by ICICI, UTI, LIC, GIC, Asian Development Bank as the first CRA in India. Its objective is to rate, on request from companies, their debentures, fixed deposit programmes, short-term borrowing instruments, and preference shares. The CRISIL ratings are now required by the authorities,

banks, UTI, merchant bankers, and so on when they assist companies. Apart from CR, CRISIL provides corporate reports on a regular basis on public sector and private sector companies, containing information on their financial, business, and technical aspects. It also undertakes industry studies on requests covering topics such as structure of industry, basis of competition and demand/supply estimates. In 1998, CRISIL sets up India Index Services Ltd (IISL), a joint venture with NSEIL to provide a variety of indices and index-related services and products to India's capital market. Credit Rating Information Services of India Ltd launches the CRISIL Composite Performance Ranking (CRISIL-CPR) to provide performance evaluation standards and investment decision support to mutual fund houses, distributors and investors in the year 2000. Credit Rating Information Services of India Ltd sets up its investment and risk management services group to offer integrated risk management solutions and advice to banks and corporates in the year 2003. CRISIL launches Small and Medium Enterprise (SME) ratings to serve the specialised needs of the SME sector. Credit Rating Information Services of India Ltd launches IPO grading services to provide investors with independent, reliable and consistent assessments of the fundamental strengths of new public issues.

Investment Information and Credit Rating Agency of India Ltd. (ICRA)

Investment Information and Credit Rating Agency of India Ltd. (ICRA) (formerly Investment Information and Credit Rating Agency of India Limited) was set up in 1991 by leading financial/investment institutions, commercial banks and financial services companies as an independent and professional investment information and credit rating agency. Investment Information and Credit Rating Agency of India Ltd. (ICRA) is a Public Limited Company, with its shares listed on the Bombay Stock Exchange and the National Stock Exchange. The international Credit Rating Agency Moody's Investors Service[1] is ICRA's largest shareholder. Investment Information and Credit Rating Agency of India Ltd. (ICRA) rates rupee-denominated debt instruments issued by manufacturing companies, commercial banks, non-banking finance companies, financial institutions, public sector undertakings and municipalities, among others. Investment Information and Credit Rating Agency of India Ltd. (ICRA) also rates structured obligations and sector-specific debt obligations such as instruments issued by power, telecom and infrastructure companies. The other services offered include Corporate Governance Rating, Stakeholder Value and Governance Rating, Credit Risk Rating of Debt Mutual Funds, Rating of Claims Paying Ability of Insurance Companies, Project Finance Rating, Line of Credit Rating and Valuation of Principal Protected-Market Linked Debentures (PP-MLD). Investment Information and Credit Rating Agency of India Ltd. (ICRA), along with National Small Industries Corporation Limited (NSIC), has launched a performance and credit rating scheme for small-scale enterprises in India. The service is aimed at enabling Small and Medium Enterprises (SMEs) in improving their access to institutional credit, increase their competitiveness and raise their market standing.

The grading services offered by ICRA employ pioneering concepts and methodologies, and include grading of: Microfinance Institutions (MFIs); construction entities; real estate developers and projects; and maritime training institutes. In MFI grading, the focus of ICRA's grading exercise is on evaluating the candidate institution's business and financial risks. The grading of construction entities seeks to provide an independent opinion on the quality of performance of the entities graded. Similarly, the grading of real estate developers and projects seeks to make property buyers aware of the risks associated with real estate projects, and with the developers' ability to deliver in accordance with the terms agreed. In the education sector, ICRA offers the innovative service of grading of maritime training institutes in India. This apart, ICRA has been offering the services of grading of Renewable Energy Service Companies (RESCOs) and System Integrators (SI); grading

of Management Education Institutes; grading of Engineering Colleges/Universities; grading of fundamental strength and recovery prospects; and corporate responsibility and sustainable-business grading.[7]

Credit Analysis and Research Ltd. (CARE)

It commenced operations in November 1993. It has been set up by the IDBI in collaboration with some banks and financial service companies. CARE Ratings has also emerged as the leading agency for covering many rating segments like that for banks, sub-sovereigns and IPO grading. Credit Analysis and Research Ltd ratings provide the entire spectrum of credit rating that help the corporates to raise capital for their various requirements and assists the investors to form an informed investment decision based on the credit risk and their own risk-return expectations. Developed and launched a Debt Quality Index called CDQI. The Index denotes the quality of debt in the country that can be interpreted over time and juxtaposed with other developments in the financial sector. It has launched rating of Real Estate Investment Trusts (REITs). Partnered with four other domestic credit rating agencies in Brazil, Malaysia, Portugal and South Africa, to form an international credit rating agency called ARC Ratings. ARC Ratings was launched on January 2014 in London.

Brickwork Ratings India Private Limited (BWR)

Brickwork Ratings India Private Limited **(**BWR) is a SEBI registered rating agency. It has been accredited by the RBI and CANARA bank is the leading promoter of the BWR. It was established in the year 2008. Brickwork Ratings India Private Limited offers bank loan ratings to large, medium and small companies. It has been empanelled by the National Small Industries Corporations of India, Ministry of Micro, Small and Medium Enterprises, Government of India. National Bank for Agriculture and Rural Development (NABARD) has empanelled BWR for MFI and NGO grading.

SME Rating Agency of India Ltd. (SMERA)[8]

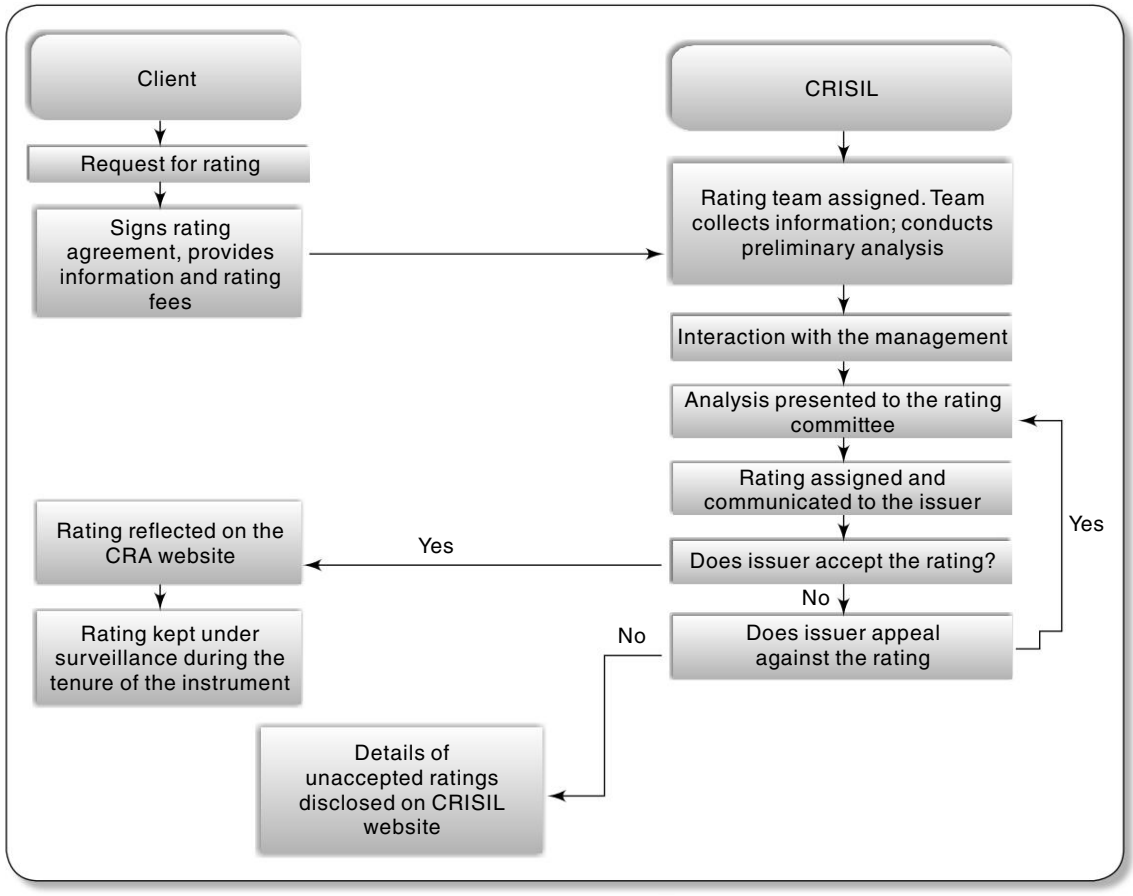
SME Rating Agency of India Ltd (SMERA) is a full service Credit Rating Agency, registered with the Securities and Exchange Board of India (SEBI), and accredited by Reserve Bank of India (RBI) as an External Credit Assessment Institution (ECAI), for Bank Loan Ratings under BASEL-II norms. It is incorporated in the year 2005. SME Rating Agency of India Ltd is empanelled with National Small Industries Corporation (NSIC), the nodal agency of the Ministry of MSME, Government of India to provide SMERA-D and B-NSIC Micro and Small Enterprises Rating for MSEs in India. SME Rating Agency of India Ltd is an institutionally promoted organisation with country's leading public and private sector banks as its shareholders. Small Industries Development Bank of India (SIDBI), which is the principal financial institution for the promotion, financing and development of the MSME sector in India, promoted SMERA under the directive of the Government of India together with Dun and Bradstreet Information Services India Private Limited (D and B), the leading provider of reliable, consistent and objective credit information. SME Rating Agency of India Ltd is responsible for providing credit rating services to issuers of bonds, non-convertible debentures and fixed deposits. This division began its operations in 2011 upon receiving the registration of Securities and Exchange Board of India (SEBI) as a credit rating agency. This division also provides bank loan rating services since 2012 (under Basel II Capital Adequacy guidelines of Reserve Bank of India) to bank borrowers. SME ratings and gradings division of SMERA are responsible for developing and providing rating and grading services for Micro, Small and Medium Enterprises (MSMEs).

[7]http://www.icra.in
[8]www. smera.in

13.8 CREDIT RATING PROCESS

LO 5 Explain the credit rating process

The credit rating process of all the credit rating companies is more or less same. For the understanding, the process followed by CRISIL has been presented in Figure 13.1.



Source: www.crisil.com

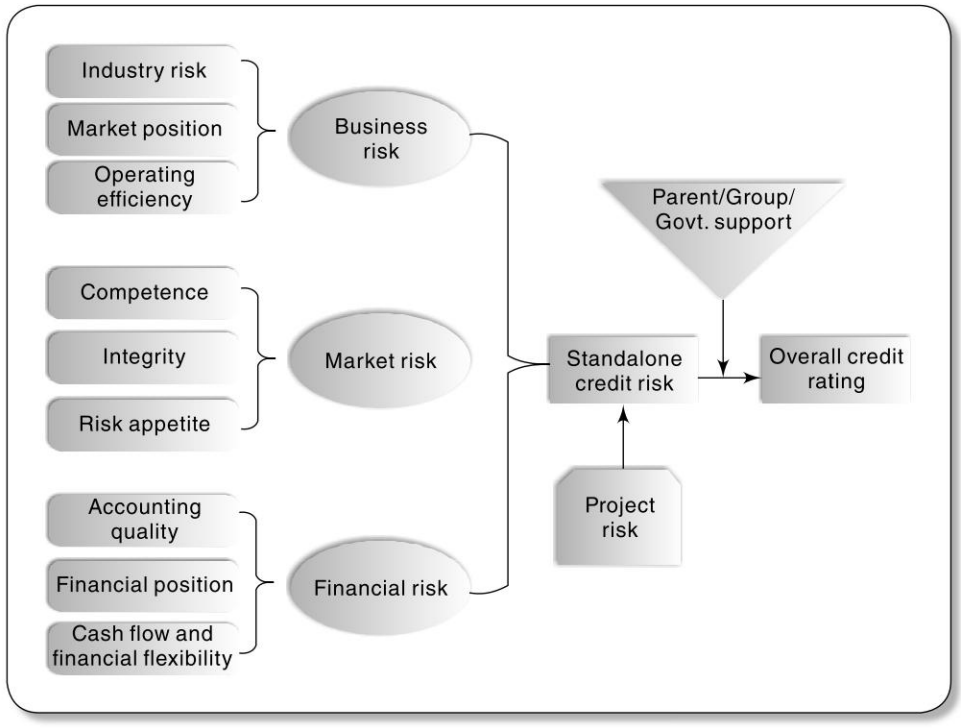
Figure 13.1 Credit Rating Process Followed by CRISIL.

13.8.1 Credit Rating Methodology (CRISIL)

The credit rating criteria vary across the nature of the companies. The rating criteria for manufacturing companies are different from banks and financial institutions. The different credit rating agencies follow different approaches, but the factors are more or less similar. For understanding, a discussion on the factors considered for assigning rating to banks and financial institutions and manufacturing and services sector companies by CRISIL are explained as follows:

Rating Framework for Manufacturing and Service Sector Companies

The factors considered for rating of banks and financial institutions have been summarized in Figure 13.2.



Source: www.crisil.com

Figure 13.2 CRISIL's Rating Framework for Manufacturing and Service Sector Companies

Rating Framework for Banks and Financial Institutions

An entity-specific analysis of the risk profile is done through a qualitative and quantitative approach following a structured methodology called the 'CRAMEL' model. Credit Rating Information Services of India Limited also evaluates the market position of the bank or Financial Institution (FI) being rated, and the strategy it adopts to cope with the emerging competitive scenario. The 'CRAMEL' model comprises: Capital adequacy, Resource-raising ability, Asset quality, Management and systems evaluation, Earnings potential and Liquidity/asset liability management.

Capital Adequacy

An entity's capital provides it with the necessary cushion to withstand credit risks and other risks in its business. While assigning a rating, CRISIL analyses the capital adequacy level and its sustainability over the medium to long term. The analysis encompasses the following factors:

- Adherence to capital adequacy requirements as per Basel III regulatory norms
- Size of capital

- Sustainability of capital ratios and flexibility to raise Tier I and hybrid capital
- Quality of capital (Tier I capital)
- Growth plans

Resource-Raising Ability

The resource position of the bank/FI in terms of its ability to maintain a low-cost, stable resource base is analysed considering the following factors:

- Size of deposit base
- Diversity in deposit base and the geographical spread
- Deposit mix
- Growth in deposits
- Cost of deposits
- Diversity of investor base
- Funding mix and cost of funds
- Retail penetration and tax benefits

Asset quality

A bank or FI's asset quality is a measure of its ability to manage credit risks. The asset quality is analysed on the basis of the following parameters:

- Geographical diversity and diversity across industries
- Client profile of the corporate asset portfolio
- Quality of non-industrial lending
- Weak asset levels
- Movement of provisions and write-offs
- Growth in advances

Management and Systems Evaluation

The quality of management is an important differentiating factor in the future performance of a bank/FI. The management is evaluated on the following parameters:

- Goals and strategies
- Systems and monitoring
- Appetite for risk
- Competence and Integrity

Earnings Potential

A bank/FI's earnings are analysed on the basis of the level, diversity and stability of earnings. The parameters used for analysing earning potential are as follows:

- Level of earnings
- Diversity of income sources
- Efficiency measures

Liquidity/Asset Liability Management

The quantum and quality of liquid assets available are assessed through reliance on short-term funding and asset liability maturity profile of the rated entity to form an opinion on the liquidity and interest rate risks. The parameters considered for this analysis are:

- Liquidity risk
- Liquid assets/Total assets
- Liquidity Coverage Ratio (LCR)
- Proportion of small deposits
- Interest rate risk

13.8.2 Rating Symbols and Definitions

The rating symbols are different for different types of assets. The rating symbols of debt instruments are reported here. Tables 13.7 and 13.8 show the credit rating scales used by various credit rating agencies operating in India.

Table 13.7 Credit Rating Scales for Long-Term Debt Instruments

(CRISIL, ICRA and CARE)

AAA	Instruments with this rating are considered to have the highest degree of safety regarding timely servicing of financial obligations. Such instruments carry lowest credit risk.
AA	Instruments with this rating are considered to have high degree of safety regarding timely servicing of financial obligations. Such instruments carry very low credit risk.
A	Instruments with this rating are considered to have adequate degree of safety regarding timely servicing of financial obligations. Such instruments carry low credit risk.
BBB	Instruments with this rating are considered to have moderate degree of safety regarding timely servicing of financial obligations. Such instruments carry moderate credit risk.
BB	Instruments with this rating are considered to have moderate risk of default regarding timely servicing of financial obligations.
B	Instruments with this rating are considered to have high risk of default regarding timely servicing of financial obligations.
C	Instruments with this rating are considered to have very high risk of default regarding timely servicing of financial obligations.
D	Instruments with this rating are in default or are expected to be in default soon

Source: http://www.careratings.com/resources/rating-resources.aspx

Table 13.8 Credit Rating Scales for Long-Term Debt Instruments

(CRISIL, ICRA and CARE)

Symbols	*Rating definition*
A1	Instruments with this rating are considered to have very strong degree of safety regarding timely payment of financial obligations. Such instruments carry lowest credit risk.
A2	Instruments with this rating are considered to have strong degree of safety regarding timely payment of financial obligations. Such instruments carry low credit risk.

(*Contd.*)

A3	Instruments with this rating are considered to have moderate degree of safety regarding timely payment of financial obligations. Such instruments carry higher credit risk as compared to instruments rated in the two higher categories.
A4	Instruments with this rating are considered to have minimal degree of safety regarding timely payment of financial obligations. Such instruments carry very high credit risk and are susceptible to default.
D	Instruments with this rating are in default or expected to be in default on maturity.

http://www.careratings.com/resources/rating-resources.aspx

13.9 DEPOSITORY AND CUSTODIAL SERVICES

The phenomenal growth of both the primary and secondary equities and debentures markets, and the entry of bulk traders (domestic and foreign financial institutions) in it have revealed the gross inadequacies of the market infrastructure to support the new levels/volumes of securities trading in India. The existing, traditional, manual methods of trading, clearing, settlement, transfer, registration, record-keeping have been found to be cumbersome and time consuming; they have put the securities industry in a 'paperwork grid lock' resulting in the slowing down of its growth. The sudden expansion of this industry has led to a tremendous increase in the systemic risks—counterparty risk, credit risk, bad deliveries, long-delayed deliveries, counterfeit scrips, forged certificates, wrong signatures and also stealing of shares. All this impressed upon the people concerned a need for creating a new, modern infrastructure consisting of depositories, paperless trading and computer recording of transactions. In this regard, the role of depositories has emerged. A *depository* is an organisation which holds securities (like shares, debentures, bonds, government securities, mutual fund units, and so on) of investors in electronic form at the request of the investors through a registered depository participant. It also provides services related to transactions in securities.

A beginning in this respect was made by the setting up of Stock Holding Corporation of India Limited (SHCIL) in August 1988. It is owned by IDBI, IFCI, ICICI, IRBI, LIC, UTI and GIC. It has introduced a book entry system for transfer of shares and other types of scrips, thereby avoiding voluminous paperwork involved and reducing delays in transfers. It also holds custody, handles transfer, collects dividend and interest in respect of securities on behalf of sponsoring institutions, stock brokers, and other investors. Its business is divided into five groups, *viz*., (a) Clearing Services, (b) Registration/Transfer processing, (c) Safe Keeping, (d) Corporate Actions and Benefits Collection, and (e) MIS. To strengthen further the depository and custodial services, the Finance Ministry mandated in 1991 the creation of the National Clearance and Depository System (NCDS). The government introduced the Ordinance for Depositories in September 1995, which was converted into the Depositories Act, 1996 for this purpose. NCDS offers three distinct services to the Indian capital markets: (a) National Trade Comparison and Reporting System (NTRS); (b) National Clearing System (NCS); and (c) National Depository System (NDS). The function of NTRS is to establish firmly the terms and conditions of contracts in the securities markets. NCS ensures that clearing can take place nationally on a standard basis to prepare the matched transactions for a depository settlement. National Depository System provides for transfer of ownership of securities in exchange for payment by book entry on ledgers of NDS without any physical movement of scrips. The overall strategic objectives of NCDS are to liberate the securities industry from the paperwork grid lock, to reduce paper handling costs, to eliminate transfer delays, and to reduce systemic risks. Its specific and critical technical objectives in order to achieve

the overall objectives are dematerialisation of new and existing issues, execution of book entry transfer of ownership of securities, implementation of delivery versus payment system, provision of both operational and transactional facilities and scrip hypothecation, and implementation of beneficial owner record-keeping. At present two depositories *viz*. National Securities Depository Limited (NSDL) and Central Depository Services (India) Limited (CDSL) are registered with SEBI. The minimum net worth stipulated by SEBI for a depository is ₹100 crore.

SUMMARY

- A Non-Banking Financial Company (NBFC) is a company registered under the Companies Act, 1956 engaged in the business of loans and advances, acquisition of shares/stocks/bonds/debentures/securities issued by government or local authority or other marketable securities of a like nature, leasing, hire-purchase, and so on.
- NBFCs perform a diversified range of functions and offer various financial services to individual, corporate, and institutional clients. They have been helping to bridge the credit gaps in several sectors which traditional institutions such as banks are unable to fulfil.
- NBFCs registered with RBI are categorized (a) in terms of the type of liabilities into deposit and non-deposit accepting NBFCs, (b) non-deposit taking NBFCs by their size into systemically important and other non-deposit holding companies (NBFC-NDSI and NBFC-ND), and (c) by the kind of activity they conduct.
- In terms of activities undertaken, NBFCs are classified into eight categories, *viz*., Asset Finance Companies (AFCs), Investment Companies (ICs), Loan Companies (LCs), Infrastructure Finance Companies (IFCs), Core Investment Companies (CICs), Infrastructure Debt Fund – Non-Banking Financial Companies (IDF-NBFCs), Non-Banking Financial Company-Micro Finance Institutions (NBFC-MFIs) and NBFC-Factors.
- Residuary Non-Banking Company is a class of NBFC which is a company and has as its principal business the receiving of deposits, under any scheme or arrangement or in any other manner and not being investment, asset financing and loan company.
- Over the years, the total number of companies registered with RBI has been fluctuating, but the number of deposit taking NBFCs has been declining continuously.
- Other NBFCs such as Housing Finance Companies are regulated by National Housing Bank, Merchant Banker, Venture Capital Fund are regulated by Securities and Exchange Board of India. Similarly, *Nidhi* Companies are regulated by Ministry of Corporate Affairs, Government of India.
- Companies that do financial business but are regulated by other regulators are given specific exemption by the Reserve Bank of India from its regulatory requirements for avoiding duality of regulation.
- A **credit rating agency** is a company which rates the debtors on the basis of their ability to pay back the debt in timely manner. They rate large scale borrowers, whether companies or governments.
- The major rating agencies in India registered with SEBI are: Credit Rating Information Services of India Ltd. (CRISIL), Investment Information and Credit Rating Agency of India Ltd. (ICRA), Credit Analysis and Research Ltd. (CARE), Brickwork Ratings India Private Limited (BWR), and SME Rating Agency of India Ltd. (SMERA).

- At present, two depositories *viz*. National Securities Depository Limited (NSDL) and Central Depository Services (India) Limited (CDSL) are registered with SEBI. The minimum net worth stipulated by SEBI for a depository is ₹100 crore.

KEY TERMS

Non-Banking Financial Company
Asset Finance Company
Investment Company
Loan Company
Infrastructure Finance Company
Mortgage Guarantee Company
Hire-Purchase
Leasing
Housing Finance Company
Merchant Banks
Venture Capital Funds
Mutual Benefit Financial Company
Credit Rating Agency
Depository and Custodial Services
Non-Banking Institutions

QUESTIONS

1. Define a Non-Banking Financial Company and how it is different from the bank.
2. Explain the role and objectives of NBFCs registered with RBI classified on the basis of their activities.
3. Write a note on the regulatory framework of NBFCs registered with RBI.
4. Provide a synoptic view of the growth of the NBFCs registered with RBI during the period 2000–2001 to 2015–2016.
5. What are the roles of housing finance companies? Briefly discuss about the major housing finance companies operating in India.
6. What are the highlights of *Pradhan Mantri Awas Yojana*?
7. What is merchant bank? Explain the various activities or services provided by the merchant banks.
8. What are the SEBI guidelines on the operation of merchant banks in India?
9. Discuss the nature and role of venture capital funds. Highlight the investment guidelines given by SEBI for financing plans of foreign venture capital funds.
10. What are the objectives of credit rating?
11. Present a brief note on the credit rating agencies operating in India.
12. Explain the credit rating process.
13. What are the factors considered for assigning ratings to banks and financial institutions, manufacturing and services companies in India?
14. Write a brief note on the different rating symbols used for debt instruments issued by the different companies.
15. Write a short note on the depository and custodial services.

Non-Bank Statutory Financial Organisations

14 CHAPTER

Learning Objectives

- **LO 1** Know the major NBSFOs operating in India
- **LO 2** Understand the structure of NBSFOs
- **LO 3** Explain the features of assistance Provided by NBSFOs
- **LO 4** Review the growth of financial assistance sanctioned and disbursed by AIFIs
- **LO 5** Describe development financial institutions

14.1 INTRODUCTION

In this chapter, we will discuss the functioning of an important group of institutions called Non-Bank Statutory Financial Organisations (NBSFOs), though this is not a very precise title for this group. In fact, the number and diversity of these institutions are so great that any single classificatory appellation cannot accurately reflect the nature of each institution in this group. They cannot be classified as banks, but the names of some of them include the term 'bank'. They are not financial intermediaries because till recently they generally did not mobilise savings from the ultimate surplus spending units and instead obtained their resources primarily from the government and the RBI, but now some of them have begun mobilising public savings directly or indirectly. They have mostly been set up statutorily by the government, but some private sector participation in the ownership and functioning of some of them may also exist. They are usually special or specialised institutions, but some of them may have a much general functional coverage.

Subject to such exceptions, NBSFOs may be regarded as a reasonably distinguishing title for these institutions. They are also recognised as 'development banks', or 'term lending institutions', or 'special (specialised) development financial institutions (organisations)'. All of them were set up during the planning era; their emergence and growth have been a corollary to the adoption of a planned economic system. They are like federal agencies in the US. Although similar institutions exist in other countries also, in none of the other mixed or free enterprise economic systems do they dominate the financial system as they do in India. Notwithstanding significant changes in their sources of funds, and functions, and conversion of a few of them into banks and private companies, we continue to call them NBSFOs because it is only such a title that can be appropriate for their whole group, which reflects historical reality, and which enables us to maintain continuity with the earlier editions of this book.

14.2 MAJOR NBSFOS OPERATING IN INDIA

LO 1
Know the major NBSFOs operating in India

There are many NBSFOs operating in India. Out of all these NBSFOs, till end-March 2016, there were four All India Financial Institutions (AIFIs) under the Reserve Bank's full-fledged regulation and supervision *viz*. the Export Import Bank of India (EXIM Bank), National Bank for Agriculture and Rural Development (NABARD), National Housing Bank (NHB) and Small Industries Development Bank of India (SIDBI). In the following section, first we have discussed about these four institutions and further the discussions on all other NBSFOs are provided.

14.2.1 Export-Import Bank of India (EXIM Bank)

Export-Import Bank of India (EXIM Bank) is a specialized financial institution, wholly owned by the Government of India, set up on 1 January, 1982, for financing, facilitating and promoting foreign trade of India. Including the share capital of 1300 crore received during the year from Government of India, the paid up capital as on March 31, 2015, stood at ₹5059 crore and the net worth stood at ₹9902 crore. Profit after tax of the Bank for the year 2014–2015 amounted to ₹726 crore. It grants direct loans in India and outside for the purpose of exports and imports, re-finances loans of banks and other notified financial institutions for purposes of international trade, re-discounts usance export bills for banks, provides overseas investment finance for Indian companies towards their equity participation in joint ventures abroad and guarantees, along with banks, obligations on behalf of project exporters. It is also a co-ordinating agency in the field of international finance, and it undertakes development of merchant banking activities in relation to export-oriented industries. It thus provides fund-based as well as non-fund-based assistance in the foreign trade sector. Specifically, its products and services include: (a) post-shipment term finance, (b) pre-shipment credit, (c) term loans for export-oriented units, (d) overseas investment finance, (e) finance for export marketing, (f) overseas buyer's credit lines of credit to foreign governments, (g) re-lending facility to banks abroad, (h) re-discounting of export bills, (i) re-finance of export credit, (j) bulk import finance, and (k) research, analysis, advisory and information services. Its sources of funds come from share capital, reserves, re-payment of loans, loans from RBI and the government, bond issues in the domestic and foreign capital markets, loans from international financial institutions and so on.

EXIM Bank has laid strong emphasis on enhancing project exports, the funding options for which have been enhanced with the introduction of the Buyer's Credit-National Export Insurance Account (BC-NEIA) program. The Bank facilitates two-way technology transfer by financing import of technology in India, and investment abroad by Indian companies for setting up joint ventures, subsidiaries or undertaking overseas acquisitions. To promote hi-tech exports from India, the Bank has a lending programme to finance research and development (R&D) activities of export-oriented companies. During the year ended 31st March, 2015, EXIM Bank has sanctioned loans of 57,684 crore, while disbursements were amounted to 38,508 crore. Loan Assets stood at 86,953 crore as on March 31, 2015. During the year 2014–2015, the Bank issued India's first USD denominated green bonds with a benchmark size of US$500 million. During the year, an Export Development Fund (EDF) facility, a special fund, established by GoI under the Exim Bank Act and administered by Exim Bank, to sanction loans in the interest of international trade towards meeting strategic objectives was put to use.

14.2.2 National Bank for Agricultural and Rural Development (NABARD)

The NABARD was set up on July 12, 1982 under an Act of Parliament as a central or apex institution for financing agricultural and rural sectors. Its paid-up capital of ₹100 crore is subscribed by the government and the RBI in equal amounts. It has taken over the functions of Agricultural Refinance and Development Corporation (ARDC) which, in turn, was set up in 1975 in the place of former Agricultural Refinance Corporation (ARC) which was set up in July 1963. It endeavours to make rural credit institutions financially viable and organisationally strong so as to enable them to provide adequate and timely credit. The amendments to NABARD Act in 2001, classifying it as a 'Development Bank', have permitted it to enhance its capital, subject to a minimum holding of 51 percent by the GoI and RBI. It has been given flexibility in respect of resources mobilisation, credit delivery and setting up of subsidiaries. It operates through 28 regional offices, 336 district offices, one sub-office at Port Blair and one special cell at Srinagar.

It oversees the entire rural credit system and to that extent, it has taken over a part of the job of the RBI. It has also taken over re-financing function of the RBI relating to state co-operative banks and RRBs. It is a co-ordinating agency, in respect of agriculture and rural development activities/policies of the central and state governments, Planning Commission and other institutions. It undertakes inspection of co-operative banks and RRBs without prejudice to the powers of the RBI. It aims at the prosperity of rural areas through integrated rural development. Towards this end, it provides credit for the development of agriculture, small-scale industries, cottage and village industries, handicrafts and other rural crafts and allied economic activities in rural areas. However, it is primarily a re-financing agency; it provides very little direct finance to final users. It provides short-term re-finance assistance for a period up to 18 months to state co-operative banks, commercial banks, RRBs and so on for a wide range of activities in the areas of production, trading, marketing and storage. It also gives long-term loans (up to 25 years of maturity) to SCBs, SLDBs, RRBs, commercial banks and other approved institutions for the purpose of making investment loans. It gives loans up to 20 years of maturity to the state governments to enable them to subscribe to the share capital of co-operative credit societies. It sanctions re-finance assistance under IRDP. It also provides conversion or re-scheduling facilities, in the event of natural calamities. NABARD provides (a) long-term re-finance for minor irrigation, plantation, horticulture, land development, farm mechanisation, animal husbandry, fisheries and so on; (b) short-term loan assistance for financing of seasonal agricultural operations, marketing of crops, purchase/procurement/distribution of agricultural inputs and so on; (c) medium-term loan facilities for approved agricultural purposes; (d) working capital re-finance for handloom weavers; and (e) re-finance for financing government-sponsored programmes such as IRDP, *Rozgar Yojana* and so on. Its resources comprise a line of credit from the RBI, loans from the central government, World Bank, IDA and other multilateral and bilateral aid agencies, sales of bonds and debentures, direct-borrowings, deposits, gifts, grants, and so on. It has been associated with the implementation of a number of projects with financial assistance from the World Bank and International Fund for Agricultural Development (IFAD).

14.2.3 National Housing Bank (NHB)

National Housing Board (NHB) was set up in July 1988 as an apex level housing finance institution and as a wholly owned subsidiary of the RBI. The explicit and primary aim of the NHB is to promote housing

finance institutions at local and regional levels in the private and joint sectors by providing financial and other support to such institutions. It re-finances housing loans under its re-finance schemes for scheduled commercial and co-operative banks, housing finance companies, apex co-operative housing finance societies and so on. It extends financial support to SLDBs in respect of their housing loans through subscription of 'special rural housing debentures' floated by them.

14.2.4 Small Industries Development Bank of India (SIDBI)

Small Industries Development Bank of India (SIDBI) was set up in October 1989 under the Act of Parliament as a wholly owned subsidiary of the IDBI. Its authorised capital is ₹250 crore with an enabling provision to increase it to ₹1000 crore. It is the central or apex or principal institution which oversees co-ordinates and further strengthens various arrangements for providing financial and non-financial assistance to small-scale, tiny and cottage industries. In pursuance of the SIDBI (Amendment) Act, 2000, 51.1 percent of the shares of the SIDBI held by IDBI have been transferred to select public sector banks, LIC, GIC and other institutions owned and controlled by the central government. Its objectives were: (a) To initiate steps for technological up-gradation and modernisation of existing units; (b) To expand channels for marketing of SSI sector products in India and abroad; and (c) To promote employment-oriented industries in semi-urban areas and to check migration of population to big cities. It operates two funds: Small Industries Development Fund and Small Industries Development Assistance Fund and National Equity Fund. The operations of both the funds were earlier looked after by the IDBI are now handled by SIDBI. Its financial assistance is channelled through the existing credit delivery system comprising NSIC, SFCs, SIDCs, SSIDCs, commercial banks, co-operative banks and RRBs.

The Small Industries Development Bank of India (Amendment) Bill, 2012 was introduced in the Lok Sabha on May 22, 2012. The Bill amends key definitions relating to the coverage of SIDBI and provides additional functions for SIDBI.

- The definition of 'industrial concern in the small-scale sector' is provided for in the Act and notified by the central government. In February 2009, the notification to amend the definition of industrial undertaking was cancelled. In addition, the Micro Small and Medium Enterprises Development Act, 2006 provided classification of enterprises into micro, small and medium categories.
- In light of this, the Bill amends the definition of 'industrial concern in the small sector', replacing the term with the expression 'industrial concern or micro enterprise or small enterprise or medium enterprise'. 'Industrial concern' is defined as any concern with an investment limit specified by the Board of Directors, while 'enterprise' is as defined in the Micro Small and Medium Enterprises Development Act, 2006.
- In addition, the activities included under industrial concern are expanded in the Bill. Industrial concern now includes concerns engaged in: floriculture activities; establishment or development of tourism related facilities; financial assistance services like venture capital; road development, maintenance and construction; and the entertainment industry.
- The Bill expands the scope of business of the SIDBI. Acting as an agent of the central bank, government or any other entity authorised by the Board, SIDBI can provide loans and grants to financial institutions

or other agencies. The loans and grants can be used as financial assistance to any institution involved in infrastructure projects; sourcing materials; marketing and support services for any industrial concern or micro enterprise or small enterprise or medium enterprise.

- In addition, SIDBI, acting as an agent for a government entity, can enter into a securitisation transaction to extend the services of SIDBI or to acquire the rights of intermediaries in relation to loans or advance granted to any industrial concern or micro enterprise or small enterprise or medium enterprise.
- The Bill includes micro finance institutions under SIDBI's coverage. SIDBI can now grant loans to support to micro-finance institutions working with an industrial concern or micro-enterprise or small enterprise or medium enterprise.
- In addition, SIDBI can now financially assist any institution providing non-life insurance products to any industrial concern or micro-enterprise or small enterprise or medium enterprise.
- The Act is amended to allow SIDBI to accept re-payment of foreign currency loans in foreign currency.
- The Bill changes the provision for securities held in trust when accommodation has been granted. Currently, all securities on account of the transaction (for which accommodation has been granted) should be held by the borrowing institution in trust for SIDBI. The Bill amends this to treat these securities as charged in favour of SIDBI.
- The Act details the rights of SIDBI in the case of default by any borrower. SIDBI has the right to take over the management or possession of any small-scale industrial concern that has defaulted. The Bill extends SIDBI's power to have the right of possession, or transfer, of any property mortgaged by a third party. A 'third party' is defined as any person providing a mortgage or guarantee as a security for financial assistance granted by SIDBI.
- In the case of default, SIDBI can seek assistance from the Chief Metropolitan Magistrate or District Magistrate for custody or takeover of possession. The Bill enables the District Magistrate or the Chief Metropolitan Magistrate to authorise sub-ordinate officers to take possession of property, any effects or other related document and to forward them to SIDBI.

Tables 14.1–14.4 show the financial position of the selected four All India Financial Institutions registered with the RBI. Deposits constitute the largest share of total liabilities followed by bonds and debentures. The net profit of these AIFIs has increased continuously during 2010–2015, but in the year 2016 it has declined slightly. Among all the assets, the share of loans and advances has been the highest followed by investments. During the year 2015–2016, the return on assets (RoA) of all the four AIFIs showed deterioration, partially due to increasing operating costs. Return on assets (RoA) was the highest for SIDBI followed by NHB, NABARD and EXIM Bank. The net NPAs to net loans ratios are very low. National Housing Board and SIDBI's asset quality is improved whereas that of EXIM Bank witnessed deterioration. EXIM Bank also had the largest quantum of net NPAs among the AIFIs. All India Financial Institutions (AIFIs) have maintained capital in excess of the stipulated norm and their capital adequacy position comparatively improved during the whole period.

Table 14.1 Balance sheet of All India Financial Institutions **(Amount in ₹ Crore)**

Item/Year	*2010*	*2011*	*2012*	*2013*	*2014*	*2015*	*2016*
Capital	4600(1.8)	4900(1.7)	6200(1.8)	7959.4(2.0)	9359.4(2.06)	10959.4(2.21)	13596.3(2.42)
Reserves	39556(15.9)	42612(14.7)	46524.3(13.8)	48994.8(12.6)	52029.8(11.45)	38119.7(7.09)	43501.7(7.75)
Bonds and Debentures	71011(28.5)	90097(31.0)	107297.3(31.9)	123340.8(31.6)	114180.1(25.13)	118762.5(23.96)	138576.7(24.69)
Deposits	79472(31.9)	92782(31.9)	109078(32.4)	130919.1(33.6)	186542(41.45)	230943.6(46.60)	238728.2(42.53)
Borrowings	35307(14.2)	42681(14.7)	49520.7(14.7)	56574.1(14.5)	65945.6(14.51)	46927.1(9.47)	74111.7(13.2)
Other liabilities	19037(7.6)	17544(6.0)	17708.5(5.3)	22038.4(5.7)	26348.6(5.80)	49901.1(10.07)	52828.5(9.41)
Total	**248983**	**290616**	**336328.8**	**389826.5**	**454405.4**	**495613.3**	**561343.2**
Cash and Bank balances	3694(1.5)	5814(2.0)	6739.8(2.0)	9180.2(2.4)	7336.4(1.61)	20530.5(4.14)	27287.2(4.86)
Investments	8676(3.5)	11802(4.1)	12558.9(3.7)	11761(3.0)	24334.5(5.36)	32358.5(6.53)	42166.3(7.51)
Loans and advances	214671(86.2)	250238(86.1)	298199.6(88.7)	345984.2(88.8)	391109(86.07)	427315.5(86.22)	476176.9(84.83)
Bills discounted	2668(1.1)	3542(1.2)	2963.6(0.9)	4273.3(1.1)	5838.5(1.28)	3573.6(0.72)	2638.3(0.47)
Fixed Assets	553(0.2)	537(0.2)	5364(0.2)	6258(0.2)	625.3(0.14)	658.4(0.13)	692.2(0.12)
Other Assets	18722(7.5)	18682(6.4)	15330.6(4.6)	18002(4.6)	25161.7(5.54)	11176.9(2.26)	12382.2(2.21)

Source: RBI, RTPBI, Various issues

Table 14.2 Financial Performance of AIFIs **(Amount in ₹ Crore)**

Item/Year	*Income*	*Expenditure*	*Operating profit*	*Net profit*
2010	17965	13337	3808	2554
2011	18501.8	13742.4	3937.4	2655.6
2012	22665	16293.3	4881	3264
2013	27501	19962.6	5586.3	3837.7
2014	32576.5	23680.3	6133	4175.1
2015	35011.3	26264.6	7833.9	5293
2016	39508.4	30066.7	6972.2	4808.8

Source: RBI, RTPBI, Various issues

Table 14.3 Net NPAs to Net Loans of AIFIs of AIFIs **(Percentage)**

Year	*EXIM BANK*	*NABARD*	*NHB*	*SIDBI*	*All FIs*
2010	0.20	0.30	—	0.20	—
2011	0.20	0.20	—	0.30	0.10
2012	0.30	0.20	—	0.40	0.13
2013	0.47	0.10	0.45	0.55	0.23
2014	0.43	0.10	0.28	0.47	0.19
2015	0.60	0.10	0.32	0.86	0.26
2016	0.86	0.10	0.06	0.77	0.29

Source: RBI, RTPBI, Various issues

Table 14.4 Capital Adequacy Ratio of AIFIs **(Percentage)**

Year	*EXIM BANK*	*NABARD*	*NHB*	*SIDBI*	*All FIs*
2014	14.30	16.60	15.20	30.5	17.80
2015	15.34	16.91	15.75	36.69	18.72
2016	14.55	17.59	18.52	29.86	18.66

Source: RBI, RTPBI, Various issues

14.2.5 Industrial Financial Corporation of India (IFCI)

This is the first term-financing institution was set up in July 1948 by the Government of India under the IFCI Act, 1948 with the objective of providing medium- and long-term loans to large industrial concerns in the private sector. The constitution of IFCI was changed in 1993 from a statutory corporation to a company under the Companies Act to ensure greater flexibility to respond to the needs of rapidly changing financial system and to have an access to the capital market. With effect from October 1999, its name has been changed to IFCI Limited. From August 2007 onwards, it is being regulated as a non-banking financial company. Industrial Financial Corporation of India (IFCI) became a government controlled company subsequent to

enhancement of equity shareholding to 55.53 percent by the Government of India on December 21, 2012. In April, 2015, Government of India has acquired 6 crore preference shares of IFCI Ltd. of ₹10 each from six public sector banks. With this, the shareholding of the Government of India in paid-up share capital of IFCI has been increased to 51.04 percent and Industrial Financial Corporation of India (IFCI) has become a government company under Section 2(45) of the Companies Act, 2013. Industrial Financial Corporation of India is also a Systemically Important Non-Deposit taking Non-Banking Finance Company (NBFC-ND-SI), registered with the Reserve Bank of India.

During the course of its existence, IFCI has established various subsidiaries as an extension of its business and many other organizations of national and social importance. Recently, tangible steps have been taken for re-orientation and growth of these subsidiaries *viz*., IFCI Venture Capital Fund (IVCF), IFCI Financial Services Ltd. (IFIN), IFCI Infrastructure Development Ltd. (IIDL), and IFCI Factors Ltd. (previously Foremost Factors Ltd.). These entities, managed by professional Boards, have tremendous potential for growth and have shown remarkable progress in the immediate past year. Industrial Financial Corporation of India has also promoted some of the specialized institutions like Management Development Institute (MDI), Information and Credit Rating Agency of India Ltd. (ICRA), Asset Care Enterprise Ltd. (ACE), Institute of Leadership Development (previously known as Institute of Labour Development), and Tourism Finance Corporation of India Ltd. (TFCI). Industrial Financial Corporation of India has also taken part in establishment of national institutions like Securities Trading Corporation of India Ltd. (STCI), LIC Housing Finance Ltd., GIC Housing Finance Ltd., Entrepreneurship Development Institute of India (EDII) and various Technical Consultancy Organizations (TCOs), Stock Holding Corporation of India Ltd., National Stock Exchange of India Ltd., OTC Exchange of India, Biotech Consortium India Ltd., A B Home Finance Ltd. and continues to hold stakes in these organizations.

The primary business of IFCI is to provide medium to long term financial assistance to the manufacturing, services and infrastructure sectors. Through its subsidiaries and associate organizations, IFCI has diversified into a range of other businesses including brooking, venture capital, financial advisory, depository services,

Table 14.5 Select Financial Indicators of IFCI

Particulars	*Mar-31-11*	*Mar-31-12*	*Mar-31-13*	*Mar-31-14*	*Mar-31-15*
Equity Share Capital (₹ Crore)	737.84	737.84	1662.04	1662.04	1662.04
Reserves and Surplus (₹ Crore)	4001.72	4534.07	4757.31	5055.64	5220.28
Total Income (₹ Crore)	2480.11	2850.20	2759.30	2951.26	3347.99
Total Expenditure (₹ Crore)	1464.18	2005.17	1930.03	1772.45	2196.28
Profit after Tax (₹ Crore)	706.25	663.62	450.87	508.10	521.60
Balance Sheet Size (₹ Crore)	25,527.98	28,183.80	25,883.64	28,989.31	34,967.96
Return on Assets	3.16%	2.47%	1.67%	1.85%	1.63%
Gross NPAs	11.72%	11.36%	19.24%	17.26%	10.28%
Net NPAs	0.97%	1.92%	10.18%	11.39%	7.18%
Capital Adequacy Ratio	16.43%	21.26%	23.87%	21.34%	18.76%

Source: www.ifciltd.com

factoring and so on. It provides direct rupee and foreign currency loans for setting up new industrial projects and for expansion, diversification, renovation, and modernisation of existing units. It also underwrites and directly subscribes to industrial securities, provides financial guarantees, merchant banking services and lease finance. As a developed financial institution, a major portion of the financial assistance of IFCI was being made to Greenfield projects and to the projects in underdeveloped states. Its resources are in the form of (a) loans from the RBI, (b) share capital, (c) retained earnings, (d) re-payment of loans, (e) issue of bonds, (f) loans from the government, (g) lines of credit from foreign lending agencies, and (h) commercial borrowings in international capital markets.

Table 14.5 shows the financial position of the IFCI. It is evident from the table that the profit after tax of IFCI has increased continuously during 2010–2011 to 2014–2015. The return on assets has been fluctuating, gross and net NPA level have come down and the higher capital adequacy ratio implies the stability of the IFCI.

14.2.6 National Industrial Development Corporation (NIDC)

The NIDC was set up in October 1954 as a statutory corporation owned by the Government of India. Its functions are: (a) To formulate and execute projects for setting up new industries. (b) To provide consultancy services. (c) To finance the rehabilitation and modernisation of certain industries, such as, cotton and jute textiles, and machine tools. It is a financial PSU, a wing of Ministry of Commerce and Industry, Government of India. Its spectrum of services are: industrial planning and management, project engineering, project/construction management, procurement, technical and quality audit, social and industrial infrastructure, human resources management, environmental engineering, energy management and software, and IT development.

14.2.7 Industrial Investment Bank of India (IIBI)/Industrial Reconstruction Bank of India (IRBI)

In April 1971, the IDBI had set up, at the instance of the GOI, the Industrial Reconstruction Corporation of India (IRCI), as a joint-stock company, to provide reconstruction and rehabilitation assistance. The IFCI, ICICI, LIC and public sector banks also had contributed to its share capital. The IRCI was reconstituted and renamed as IRBI in 1985 in terms of the IRBI Act. It functions as a principal credit and reconstruction agency for industrial revival, modernisation, rehabilitation, expansion, reorganisation, diversification, and rationalisation. It is empowered to grant loans and advances; underwrite stocks, shares and bonds and guarantee loans, performance, and deferred payments. It gives assistance for capital expenditure, addition of balancing equipment, correcting imbalances in working capital of sick, weak, closed units and those facing imminent closure. It also acts as a co-ordinating agency in the field of reconstruction. Its development activities included: providing infrastructural facilities, raw materials, consultancy, managerial and merchant banking services, lease finance, and hire-purchase credit. The units in public, private, co-operative and joint sectors are covered by its operation. The Union Budget 1996–1997 proposed to transform the IRBI into a full-fledged all-purpose development finance institution. Accordingly, on March 27, 1997, IRBI was transformed into Industrial Investment Bank of India Ltd. (IIBI), by registering it as a limited company under the Companies Act, 1956. The purpose of this change was to make this institution as a full-fledged development financial institution. Industrial Investment Bank of India Ltd offers a variety of financial products such as project finance, short duration non-project asset-backed financing and working capital, and other short-term loans to companies.

14.2.8 Infrastructure Leasing and Financial Services Ltd. (IL&FS)

The Infrastructure Leasing and Financial Services Limited was set up in May 1988 jointly by the Central Bank of India (CBI), UTI, HDFC, International Finance Corporation, ORIX Corporation from Japan, Credit Commercial de France, and SBI. Over the years, IL&FS has broad-based its shareholding and Life Insurance Corporation of India, and Abu Dhabi Investment Authority. It functions as a subsidiary of CBI. The areas of its assistance are: (a) Financing of large infrastructure projects like highways, bridges and power plants; (b) Equipments leasing for infrastructure development, pollution control, transportation and communication; (c) Investment banking services including promotion of mutual funds and extension of venture capital; and (d) Participation as a member of stock exchanges with a focus on the development of secondary markets. It concentrates on fully pay-out financial leases. It has been admitted as a member of Delhi Stock Exchange and is awaiting clearance for the membership of Bombay Stock Exchange. Its operations in financial markets are focused on government securities, corporate debentures and bonds of public sector units. Infrastructure Leasing and Financial Services Limited is a leading participant in the financial services sector in India and operates in the areas such as project finance and syndication mergers and acquisitions, infrastructure financing, asset management, venture capital, securities, trading services, and so on. It identifies, conceptualises, structures, develops and deploys resources in a variety of projects. It assists agencies in positioning infrastructure projects for commercialisation. It has advised state governments on the legal and project framework to be adopted for transmission, hydro-electric and retrofitting projects, and developing non-conventional energy power projects in the role of a sponsor. It has developed institutional capability in commercialisation of surface transport and other transport systems, water supply, power and telecom. IL&FS Financial Service Limited (IFIN) is a 100 percent subsidiary of Infrastructure Leasing and Financial Services Limited (IL&FS), which is one of India's leading non-banking finance company providing a wide range of financial and advisory solutions under one umbrella. IL&FS Financial Service Limited has also established its international presence through its wholly owned subsidiaries; IL&FS Global Financial Services Pvt Ltd. at Singapore, IL&FS Global Financial Services (UK) Ltd at London, IL&FS Global Financial Services (ME) Limited at Dubai, and IL&FS Global Financial Services HK Ltd at Hong Kong.

14.2.9 Tourism Finance Corporation of India (TFCI)

The TFCI was set up on February 1, 1989 as a public limited company under the Companies Act by the IFCI and other all-India financial institutions and banks. Its paid-up capital is ₹50 crore. It is a specialised all-India development financing institution, which provides assistance in the form of rupee loans, foreign currency loans, underwriting of and subscription to industrial securities, deferred payments/foreign loans guarantees, suppliers' credit and equipment leasing. This form of assistance is utilised for the development of tourism and tourism-related activities, facilities, and services. These include travel agents, highway facilities, ropeways, car rental services, ferries for inland water transport, airport facilities, hotels, restaurants, holiday resorts, amusement parks, transport, and so on. It would also provide advisory and merchant banking services in this field. It is to co-ordinate activities, and formulates guidelines and policies relating to financing tourism projects. Tourism Finance Corporation of India normally considers financial assistance to projects with capital cost of at least ₹20 crore, but for providing financial assistance to heritage hotels, restaurants, food courts, pubs, tour operators, travel agents, transport sector, health spa/centres, recreational facilities and renovation/up-gradation/expansion, lower project cost could also be considered depending on the nature of the project, past track and credit record, commercial viability and the prevailing government policies for the development of tourism in the area/region. In addition, credit facilities for working capital and against credit

card receivables could be considered for smaller amounts based on the requirement of the borrower with satisfactory credit record. Tourism Finance Corporation of India will provide assistance to profit-making companies with satisfactory credit record. In case of rated companies, the minimum rating should be 'BB'. The minimum core promoters' contribution is 30 percent of the project cost. Relaxation is allowed up to 25 percent in respect of large projects involving capital cost, exclusive of the cost of land for the project, of more than ₹100 crore. Tourism Finance Corporation of India generally extends term loan assistance based on debt-equity ratio not exceeding 1.5:1 and in case of existing or assisted companies/entities on debt-equity ratio of 2:1. Higher debt-equity ratio up to 2:1 might be considered for new companies/entities, depending on debt-servicing capacity of the project. The repayment of the loan shall be over a period of 8–10 years after allowing moratorium up to 2 years from the date of commencement of commercial operations. However, in case of multiplexes/entertainment centres, the re-payment of the loan shall be over a period of 6–7 years including moratorium period.

14.2.10 Agricultural Finance Consultants Ltd. (AFC)

The AFC came into being in 1988–1989 by reconstituting the former Agricultural Finance Corporation which was set up in 1968. It undertakes a variety of consultancy assignments, monitoring and evaluation studies, on agriculture and rural development in India and abroad. It formulates projects at the instance of central and state governments, member banks, development corporations, NABARD and private entrepreneurs. It provides services for identification and appraisal of agricultural projects such as command area development block level planning, integrated tribal development, watershed management, and animal husbandry.

14.2.11 National Small Industries Corporation (NSIC)

The NSIC was set up in February 1955 with an authorised capital of ₹20 lakh which was completely subscribed by the GOI. Its main objective is to promote the growth of Micro, Small and Medium Enterprises (MSME). Its activities are: (a) To supply indigenous and imported machinery and equipment to existing and prospective entrepreneurs on hire-purchase basis on easy terms; (b) To provide (internal and export) marketing support to small-scale units through the government purchase programme; (c) To develop prototype of machines for commercial exploitation by small units; (d) To provide training in various technical trades through its prototype development and training centre; (e) To secure government orders for products of small units and to provide financial, technical and other assistance to them to fulfil such orders; (f) To secure co-ordination between small-scale and large-scale units so as to enable the former to act as ancillaries to large units; (g) To underwrite and guarantee loans to small units from banks and other institutions; and (h) To supply raw materials, spares and components to small units.

14.2.12 State Financial Corporations (SFCs)

In order to meet the financial needs of small and medium scale industrial units which are not governed by Industrial Finance Corporation, the Government of India passed State Finance Corporation Act in 1951, empowering the State Governments to start financial corporations. The authorised capital of a State Financial Corporation is fixed by the state government within the minimum and maximum limits of ₹50 lakh and 5 crore and is divided into the shares of equal value which were taken by the respective state governments, the Reserve Bank of India, scheduled banks, co-operative banks, other financial institutions such as insurance companies, investment trusts and private parties. The First State Financial Corporation was set up in Punjab

in the year 1953. The State Finance Corporations (SFCs) are the integral part of institutional finance structure in the country. State Finance Corporation promotes small and medium industries of the states. Besides, SFCs are helpful in ensuring balanced regional development, higher investment, more employment generation and broad ownership of industries. At present, there are 18 state finance corporations (out of which 17 SFCs were established under SFC Act 1951). Tamil Nadu Industrial Investment Corporation Ltd. established under company Act, 1949, is also working as state finance corporation.

The main function of State Finance Corporations is to provide long-term finance to small and medium scale industrial concerns formed as public or private limited companies, corporations, forms or proprietary concerns re-payable with in a period of 20 years. The SFCs guarantee loans raised by industrial concerns from commercial and co-operative banks re-payable within a period of 20 years. The SFCs grant loans mainly for acquisition of fixed assets like land, building, plant and machinery. The SFCs provide financial assistance to industrial units whose paid-up capital and reserves do not exceed ₹3 crore (or such higher limit up to ₹30 crore as may be specified by the central government). The State Finance Corporations subscribe to the debentures issued by the industrial concerns re-payable within 20 years and also underwrites the issue of stock, shares, bonds and debentures of industrial concerns. They guarantee the deferred payments for the purchase of plant, machinery and so on within the country. They act as an agent of the central or state governments or some industrial financing institutions for sanctioning and disbursing loans to small industries.

The SFCs operate as 'regional development banks' in respective states. They have assisted small scale units for their modernisation and technology up-gradation by providing soft loans, re-structuring the sick small scale units through rehabilitation schemes and through equity type of assistance under SIDBI's seed capital scheme. They provide financial assistance to industrial units by way of term loans, guarantees and direct subscription to equity. Over the years, they have diversified their activities and increased the scope and coverage of their assistance. The resources of SFCs come from (a) share capital, reserves, bond issues, loans from RBI and state governments; (b) re-finance from the RBI; (c) fixed deposits from the state governments, local authorities and the public; and (d) assistance from IDA.

The functioning of State Finance Corporations has been criticized mainly because of the following drawbacks.

- Concentration only on sanctioning of loans and advances even though they can subscribe to the debentures and underwrite shares and debentures issued by the units. Therefore, there is a need for re-orientation of the lending policy.
- State Finance Corporations have failed to bring about a regional balanced industrial growth. It is observed that there has been uneven development of industries with State Finance Corporations assistance in different states and regions.
- State Finance Corporations showed a bias in favour of financing large scale units rather than to small scale units.
- High rate of interest and hard terms and conditions for assistance is another criticism against the operations of SFCs.
- Most of the SFCs are facing the serious problem of continuous increasing magnitude of over dues due to delay in implementation of projects.
- Lack of adequate specialized technical and trained staff for efficient working.
- The SFCs lack self-sufficient organizational set up along with adequate specialized and trained staff ensuring their efficient functioning.
- The financial resources of the SFCs are limited and inadequate. They are facing problem of attracting more funds.

14.2.13 State Industrial Development Corporations (SIDCs)

The State Industrial Development Corporations were set up under the Companies Act, 1956, as wholly owned state government undertakings for promotion and development of medium and large industries. In addition to provision of financial assistance, they are also involved in developing industrial infrastructures like industrial estates, industrial parks and setting up industrial projects either on their own or in the joint sector in collaboration with private entrepreneurs or as wholly owned subsidiaries. State Industrial Development Corporations exist in all the states and have developed industrial infrastructure facilities to enable prospective entrepreneurs to set up their industries in the states. These corporations render technical assistance to the entrepreneurs in the formulation of the project reports and also provide common facilities in the industrial estates. These corporations provide loans and advances to the industrial units in the medium and large sectors to the maximum of ₹400 lakhs. The interest rate ranges between 13.5 and 17 percent depends upon the size of the loan. There are 28 SIDCs existing in India.

14.2.14 State Industrial Infrastructure and Investment Corporations (SIIICs)

The State Industrial Infrastructure and Investment Corporations have also been set up under the Companies Act under the overall control of the State Governments to develop industrial infrastructure in the states. As on date, only 10 such corporations have been set up in the States of Andhra Pradesh, Gujarat, Maharashtra, Orissa, Tamil Nadu, Uttar Pradesh, Delhi, and Goa. These corporations are primarily engaged in developing infrastructure, which has been identified as the major thrust area for taking the country on the path of the economic growth. The infrastructure projects undertaken by these corporations include developing industrial growth centres, export promotion zones, software parks, industrial townships, industrial parks and also industrial estates. To a large extent, these corporations are supplementing the efforts of State Industrial Development Corporations insofar as development of industrial infrastructure in the states is concerned.

14.2.15 State Small Industries Development Corporations (SSIDCs)

They have been established in various states under the Companies Act, 1956 as state government undertakings with a view to developing small, tiny and villages industries in the respective states. They are engaged in producing and distributing scarce or imported raw materials, supplying machinery on hire-purchase basis, constructing and managing industrial estates and related infrastructural facilities, providing management assistance and marketing assistance and also extending seed capital assistance. A few of the SSIDCs are: (i) Kerala Small Industries Development Corporation Limited, (ii) Small Industries Development Corporation of Jammu and Kashmir, (iii) Tamil Nadu Small Industries Development Corporation Limited (TANSIDCO), and so on.

14.2.16 National Co-operative Development Corporation (NCDC)

The NCDC was set up in March 1963 by the Act of Parliament as a development finance institution for agriculture and co-operatives sector. Its functions are: (a) To implement various programmes in the co-operative sector; (b) To provide financial assistance in the form of loans and subsidy to co-operatives under various schemes; (c) To promote, strengthen and develop farmers' co-operatives in order to increase production and productivity; (d) To plan and promote programmes relating to production, processing, marketing, storage,

export and import of agricultural goods through co-operatives; and (e) To help in the implementation of programmes meant for weaker sections of society. It handles programmes in the areas of poultry, fisheries, minor forest product, handlooms, coir, sericulture, and dairy farming. It acts as an on-lending agency for implementing projects aided by IDA and European Economic Community. As a part of this, it has already implemented certain projects in the areas of storage, cold storage, soybean processing, oilseeds, cotton processing, mustard seeds, coconut development, and so on. It has started preparing schemes for integrated co-operative development in certain districts. These schemes would bring about area development through co-operatives in agricultural, allied and non-farm sectors. One of its special areas of work is to formulate and implement programmes for distribution of consumer articles in rural areas.

National Co-operative Development Corporation assistance is not individual beneficiary oriented but is meant for institutional development of Co-operatives. National Co-operative Development Corporation supplements the efforts of state government. The state government recommends the proposal of individual society/project to NCDC in the prescribed schematic format. The Society may also avail direct funding of projects under various schemes of assistance on fulfilment of stipulated conditions. The proposals are examined in the concerned functional division, and if need be on the spot field appraisal is undertaken. Thereafter, formal sanction of funds is conveyed to the state government/society. The release of funds depends on the progress of implementation and is on re-imbursement basis. The period of re-payment of loan ranges from 3–8 years. The rate of interest varies from time to time. The purposes for which assistance is provided are as follows: (i) Margin money to raise working capital finance (100 percent loan), (ii) Strengthening of share capital base of societies (100 percent loan), (iii) Working capital to regional/state level marketing federations (100 percent loan), (iv) Term loan for creation of infrastructural facilities like godowns, cold storages, equipment financing, purchase of transport vehicles, boats and other tangible assets, (v) Term and investment loan for establishment of new, modernisation/expansion/rehabilitation/diversification of agro-processing industries, and (vi) Subsidy for preparation of project reports/feasibility studies. National Co-operative Development Corporation functions through its Head Office at New Delhi and Regional Offices located at Bangalore, Bhopal, Bhubaneswar, Chandigarh, Chennai, Dehradun, Guwahati, Gandhinagar, Hyderabad, Jaipur, Kolkata, Lucknow, Pune, Patna, Shimla, and Thiruvananthapuram.

14.2.17 Warehousing Corporations (WCs)

The Warehousing Corporation in India, established during 1957 providing logistics support to the agricultural sector, is one of the biggest public warehouse operators in the country offering logistics services to a diverse group of clients. Central Warehousing Corporation (CWC) is operating 438 warehouses across the country with a storage capacity of 10 million tonnes providing warehousing services for a wide range of products ranging from agricultural produce to sophisticated industrial products. Warehousing activities of CWC include food grain warehouses, industrial warehousing, custom bonded warehouses, container freight stations, inland clearance depots and air cargo complexes. Apart from storage and handling, CWC also offers services in the area of clearing and forwarding, handling and transportation, procurement and distribution, disinfestation services, fumigation services and other ancillary activities. Central Warehousing Corporation also offers consultancy services/training for the construction of warehousing infrastructure to different agencies. The major objectives of WCs are as follows:

- To be a major player in providing pest control services using environment friendly methods.
- To assist in implementation of warehousing (Development and Regulation) Act, 2007 with a view to expand credit potential of warehoused goods through banking institutions and NBFCs.

- To plan and diversify across the logistics value chain, through forward and backward integration in areas such as port handling, procurement and distribution, cold chain, warehousing financing, 3PL, consultancy services, multi-modal transport and so on.
- To achieve global presence in the warehousing and logistics field.
- To plan and implement human resource development programmes to improve commitment, motivation and productivity of employees for achieving customer satisfaction.
- To reduce losses during warehousing, handling, and distribution.
- To meet changing needs of agriculture, trade, industry and other sectors by providing scientific warehousing and related infrastructural facilities.
- Central Warehousing Corporation operates 66 custom bonded warehouses with a total operated capacity of nearly 0.42 million Mts. The concept of custom bonded warehousing has been promoted with a view to facilitate deferred payment of custom duty to encourage entrepreneurs and export oriented units to carry out their operations with least investment.
- These bonded warehouses are located all over the country at places well connected with the port towns for smooth movement of goods to and from the discharge points.
- Ambitious expansion of CWC over the years has also brought CWC in the operation of air cargo complexes which is a major step towards providing complete services as a multi-modal transport operator.
- Presently, CWC is operating three air cargo complexes at the International Airports of Amritsar, Goa, Singanallur and Virugambakkam besides managing the accompanied/mishandled cargo warehouse at Indira Gandhi International Airport at New Delhi.
- With a category-I licence from the Indian Railways for running container trains on pan India basis, CWC is presently operating container trains transporting EXIM containers between Loni (Delhi) to J.N. Port (Navi Mumbai) and Loni to Mundra. Central Warehousing Corporation runs about 300 trains in these sectors and handles about 26,000 TEUs annually. It is also operating Container Rail Terminals at Loni and Kalamboli (Navi Mumbai) on PPP model.

14.2.18 Rural Electrification Corporation (REC)

Rural Electrification Corporation Limited (REC), a listed NAVRATNA Public Sector Enterprise under Ministry of Power, Government of India, was incorporated on July 25, 1969 under the Companies Act 1956. Rural Electrification Corporation is a non-banking financial company with 'infrastructure finance company' status. The REC was set up with the objectives of: (a) rapid electrification of the rural and backward areas; (b) promotion of decentralised distribution of power in rural areas on co-operative basis; and (c) full exploitation of irrigation potential through energisation of pump sets. It provides assistance for electrification through various schemes.

Rural Electrification Corporation provides loan assistance to various state power utilities, private sector project developers, central power sector utilities, and state governments for investments in power generation, power transmission, power distribution and other system improvement schemes/initiatives. The different types of projects funded by REC are as under:

- **Power Generation Schemes:** (i) Setting up new power generating stations based on conventional sources of energy, that is. thermal, hydro and gas, along with associated areas like development of coal mines. (ii) Renovation and Modernization (R&M) of existing power generating stations based on conventional sources of energy. (iii) Setting up of power generation plants based on renewable energy sources like solar, wind, small hydro, biomass and so on.

- **Power Transmission Schemes:** Evacuation of power from new power generating stations and strengthening/improvement of existing transmission system in the designated areas.
- **Power Distribution Schemes:** (i) Strengthening and improvement of the power sub-transmission and distribution system in the designated areas. (ii) Conversion of Low Voltage Distribution System (LVDS) to High Voltage Distribution System (HVDS) in rural areas. (iii) Purchase of equipment and materials for strengthening/up gradation of T&D systems. (iii) Intensive load development for providing connections to rural consumers in already electrified villages. (iv) Setting up of electrical infrastructure for energisation of agricultural pump sets.
- **Short Term Loans/Medium Term Loans:** Working capital requirements for purposes like purchase of fuel for power plant, purchase of power, purchase of material and minor equipment, system and network maintenance including repair of transformers and so on.

Rural Electrification Corporation also plays an important role in the implementation of several flagship schemes of the Government of India, such as acting as the nodal agency for implementation of '*Deen Dayal Upadhyaya Gram Jyoti Yojana'* (DDUGJY), the scheme for rural electrification; the 'National Electricity Fund' (NEF), the reform linked interest subsidy scheme for power distribution companies; and for the 'Outage Management System' and '11 KV Rural Feeder Management System'; besides acting as the 'Bid Process Coordinator' for selection of developer through tariff-based competitive bidding process for the establishment of inter-state transmission systems through public-private-participation.

Rural Electrification Corporation is actively involved in the implementation of the '*Ujjwal Discom Assurance Yojana'* (UDAY), the Government of India scheme launched in October 2015, aimed at financial and operational turnaround of the state sector power distribution utilities and in monitoring of progress of the various reform linked parameters committed by the participating utilities. Rural Electrification Corporation also provides counter-part funding for the '*Integrated Power Development Scheme*' (IPDS), the Government of India scheme for improvement of the urban power infrastructure in the country.

Rural Electrification Corporation has set up a dedicated training institute, '*Central Institute for Rural Electrification*' (CIRE) at Hyderabad to cater to the training and development needs of technical and managerial personnel of power utilities as well as in-house programmes for REC personnel round the year, encompassing a broad array of power-related subjects, including technical best practices in transmission and distribution systems, legal aspects of power sector operations, power sector accounting and so on for national and international participants.

14.2.19 Technical Consultancy Organisations (TCOs)

Technical Consultancy Organisations (TCOs) were created for facilitating technical consultancy for industrial projects. These organisations were established by the All India Financial Institutions (IDBI, ICICI, IFCI and so on) in collaboration with the state level financial/development organisations and commercial banks. There are in all 18 state-level TCOs across India. Over the years, the TCOs have transformed from being consultancy firm handling project reports, market surveys and so on to multi-functional, multi-disciplinary organisations offering a wide range of services to the industrial and infrastructure sector. They are state-level organisations and their aim is to provide under a single roof a package of consultancy services needed in all stages of the project cycle. They provide appropriate, inexpensive and decentralised consultancy services to new and existing medium and small industries, the state-level business corporations, state governments, state-level financial institutions and banks. The functions of TCOs include: (a) conducting surveys on industrial potential;

(b) preparing project profiles and feasibility studies; (c) evaluating projects; (d) conducting entrepreneurship development programmes; (e) provide technical, management and administrative assistance; (f) taking up technical up-gradation and rehabilitation programmes; (g) accepting turn-key assignments to set up small- and medium-scale projects; (h) helping entrepreneurs in project conception, formulation and implementation, covering technical, marketing, commercial, financial and economic aspects. They have entered the fields of technology transfer, industrial development in rural areas, merchant banking and retainer consultancy services. A special area of activity of TCOs now is to develop backward areas and non-industry districts through IRDP. They have started adopting blocks for this purpose.

14.2.20 Biotechnology Consortium of India Limited (BCIL)

It is a new company set up by the IDBI, ICICI and other financial institutions to facilitate the setting up of technology parks and the rapid conversion of laboratory developments into commercial processes and products. The company has been set up with the share capital of ₹5 crore. It promotes venture capital funds and arranges technology and financial resources for them. More specifically, BCIL was set up in 1990 as a public limited company, with the objective of providing the linkages amongst research institutions, industry, government and funding institutions, to facilitate accelerated commercialisation of biotechnology. Promoted by the Department of Biotechnology (DBT), Government of India, its core capital of ₹5.37 crore has been contributed mainly by the All India Financial Institutions, IDBI, ICICI, IFCI, UTI and IFCI Venture Capital Funds Ltd. and the corporate sector including Ranbaxy Laboratories, Cadila Laboratories, Glaxo India, SPIC, and so on.

Biotechnology Consortium of India Limited is engaged in technology development and transfer, project consultancy, fund syndication, information dissemination and manpower training and placement related to biotechnology. For technology transfer, BCIL acts as an interface between technology sources and technology seekers. The main sources of technologies have been the universities and national laboratories where research and development projects have been funded by the DBT. Promising commercial leads are identified and developed into technology packages in close interaction with the scientists. The processes are then demonstrated to a select cross section of industries to ascertain their interest following which commercial negotiations for technology transfer are taken up and concluded. Subsequently, BCIL continues interaction with both the industries and the scientists so that any gaps in the technology are bridged effectively. The projects are monitored to ensure their timely implementation as per the terms of technology transfer agreements. Biotechnology Consortium of India Limited also organises entrepreneurs' meets to create large scale awareness about the commercial potential of the indigenously developed biotechnologies. Representatives from government and financial institutions are also invited in such meets to facilitate financial, regulatory and other support to the entrepreneurs for expeditious commercialisation.

Whenever required, BCIL offers consultancy in the form of market assessment, preparation of business plans or detailed project reports to assist the industry and the entrepreneurs. As on date, BCIL has assisted over 150 clients including research institutions, industry, entrepreneurs, government, financial institutions, and international agencies. Biotechnology Consortium of India Limited has assisted Punjab State Government in preparation of detailed project report for setting up a 'centre of excellence' in biotechnology for development and commercialisation of state-of-the-art biotechnologies. Biotechnology Consortium of India Limited is currently assisting the state governments of Uttar Pradesh, Kerala and Pondicherry for setting up biotechnology parks for catalysing investments in the area of biotechnology. Through its publications and the biotechnology club, BCIL disseminates information relevant to commercial biotechnology to industries,

institutions, universities, and entrepreneurs. It also operates a biotech industrial training and placement programme through which postgraduates in biotechnology with an aptitude in industrial activities are trained in the industry to orient them in commercial biotechnology.

14.2.21 Indian Railway Finance Corporation (IRFC)

It has been set up to help railways to finance its plan investment. The money so made available is used for acquisition of rolling stock assets and for meeting other developmental needs of the Indian Railways. The borrowing programme of IRFC is guided by the requirements projected by the Ministry of Railways. Indian Railway Finance Corporation also makes use of innovative financial instruments to diversify the debt portfolio and to minimize the cost. Its contribution to infrastructure build-up in Railways is very significant. During the financial year 2016–2017, the company was awarded the highest credit rating—CRISIL AAA/ Stable' by CRISIL, 'CARE AAA' rating by CARE and '(ICRA) AAA' rating by ICRA.

14.2.22 Infrastructure Development Finance Company (IDFC)

The IDFC, a new financial institution, has been set for providing long-term finance for infrastructure development with an authorised share capital of ₹5000 crore to be contributed by the GoI, RBI, banks and FIs. It provides finance and advisory services for infrastructure projects as well as asset management and investment banking. Infrastructure Development Finance Company was incorporated on January 30, 1997 with its registered office in Chennai and started operations on June 9, 1997. In 1998, the company registered with the Reserve Bank of India (RBI) as a non-banking financial company and in 1999 it formally became a Public Financial Institution. Infrastructure Development Finance Company is registered with the Securities and Exchange Board of India (SEBI) as a merchant banker and as an underwriter in 2000 and in 2001 as a debenture trustee. The company also set up Infrastructure Development Corporation (Karnataka) Ltd (IDECK) pursuant to a shareholders' agreement between IDECK and the State of Karnataka, HDFC and IDFC. In April 2014, the Reserve Bank of India (RBI) granted an in-principle approval to IDFC Limited to set up a new bank in the private sector, as per the RBI guidelines for licensing of new banks in the private sector. Subsequently, a scheme of arrangement was filed with the Madras High Court for demerger of Financial Undertaking (the lending business of IDFC) to IDFC Bank. All the requisite approvals were obtained and the Madras High Court approved this demerger by its order dated June 25, 2015.

14.2.23 North-Eastern Development Finance Corporation Ltd. (NEDFC)

The NEDFC was incorporated on August 9, 1995, and has commenced operations on March 1, 1996. The GoI notified it as a public financial institution under the Companies Act, 1956. It has an authorised capital of ₹500 crore and an initial subscribed capital of ₹100 crore which has been contributed by the promoters, *viz*., IDBI, SIDBI, IFCI, ICICI, UTI, LIC, GIC and SBI. Its objective is to accelerate industrial and infrastructure development in the North-East region. The primary focus of NEDFC initially will be on identifying and developing entrepreneurship, and financing the establishment of new industrial and infrastructure projects as well as expansion, diversification, and modernisation of existing industrial enterprises. It will provide venture capital, loans, working capital and other usual types of assistance provided by development banks. Apart from the institutions discussed above, there are a number of other institutions which have been set up since 1950 by the government and public financial institutions. We have discussed them in other chapters; for example, CRISIL and other credit-rating institutions, HDFC, HUDCO, NHB, SHCIL, DFHI, DICGC, ECGC, and so on.

North-Eastern Development Finance Corporation Ltd provides financial assistance to micro, small, medium, and large enterprises for setting up industrial, infrastructure and agri-allied projects in the North Eastern region of India and also microfinance through MFI/NGOs. Besides financing, the corporation offers consultancy and advisory services to the state governments, private sectors and other agencies. It conducts sector or state specific studies under its Techno-Economic Development Fund (TEDF) and is the designated nodal agency for disbursal of Government of India incentives to the industries in the North-East India under North-East Industrial and Investment Promotion Policy 2007 (NEIIPP 2007). The promotional activities include mentoring through BFC, Water Hyacinth Craft, NEDFI Convention Center, NEDFI Pavillion and so on.

14.3 STRUCTURE OF NBSFOS: SOME OBSERVATIONS

LO 2
Understand the structure of NBSFOs

(i) The list of NBSFOs is impressive indeed. But it could be argued that there are too many institutions along with functional overlapping in this sector. The discussion so far indicates how the deepening and widening of the financial system has taken place in India during the plan period at the behest of the government. The government has actively participated in building up the financial infrastructure to accelerate the rate of long-term capital formation through the setting up of these institutions. The process of creation of new institutions has continued till today. It may be noticed that many institutions have been re-constituted, re-organised and re-named, which indicates the widening or broadening of the role of these institutions from one of merely re-financing to that of development and promotion proper. These institutions are meant to meet all types of requirements (financial, consultancy, financial services, and so on) of various types of borrowers in all sectors of the economy. It is really a puzzle as to why in spite of such a remarkable institutional development in finance and related services, the various sectors of the Indian economy are suffering from stagnant growth rates, increasing sickness, and other types of problems. This list once again highlights in a very telling manner the limitations of finance or credit as a developmental factor.

(ii) The statutory financial institutions can be grouped into various classes on the following basis: (a) Whether they are set up by the central or state governments; (b) Whether they are meant for providing financial assistance to medium- and large-scale units or to small-scale units, (c) Whether they provide assistance to industry or agriculture; and (d) Whether their main function is to provide finance or some other assistance such as consultancy, guarantees and so on. This classification is still useful, although we are aware that the functional specialisation is not being strictly observed now.

(iii) In comparison with the facilities available for industrial finance, the number of institutions providing finance to the agricultural sector, and the relative (to needs and industrial finance) amount of finance provided by them is small. There are only a few institutions such as NABARD, AFC and NCDC, operating at present for the provision of development finance to the agricultural sector and allied activities.

(iv) Different central or apex institutions have been created to co-ordinate and oversee the working of various financial institutions and schemes of their assistance in different subsectors. National Bank for Agriculture and Rural Development in the field of agriculture, SIDBI in small-scale industrial sector and so on are these apex institutions. In addition, NHB is the central institution in the field of housing

finance. The functions of these apex institutions are not always clearly demarcated. Therefore, the RBI had issued the following guidelines: (a) SFCs, SIDCs, UCBs will seek re-finance from SIDBI exclusively in respect of assistance provided by them to units in SSI/tiny/decentralised sector and operating in areas other than rural areas. (b) Assistance provided to all units in the sectors just mentioned in rural areas by commercial banks, RRBs, co-operative banks other than UCBs, will be re-financed by NABARD. (c) Assistance to SCBs and CCBs may be re-financed either by SIDBI or NABARD

14.4 FEATURES OF ASSISTANCE PROVIDED BY NBSFOS

LO 3

Explain the features of assistance provided by NBSFOs

The major forms in which NBSFOs provide assistance in short are: (a) Direct loans and advances in domestic and foreign currencies. (b) Underwriting of industrial securities. (c) Direct subscription to industrial securities. To begin with, IFCI was not allowed to directly buy stocks and shares, although it could purchase industrial debentures. Further, if it had to subscribe to share capital of companies as a part of its underwriting commitments, it was required to sell such shares within a certain time period, say 7 years. Now these restrictions have been liberalised. State Finance Corporations even today are generally prohibited from direct subscription to ordinary shares. (d) Guaranteeing of loans and deferred payments in respect of imported capital goods and/or purchases of indigenous machines. (e) Re-financing of loans and re-discounting of bills of exchange. (f) Subscription to debentures/bonds of other financial institutions. (g) Provisions of advisory and consultancy services. (h) Providing machinery to small units on a hire-purchase basis. (i) Providing financial assistance, technical assistance, guidance and even managerial assistance to sick units for their rehabilitation. (j) Provision of merchant banking services, lease finance, and venture capital.

Non-Bank Statutory Financial Organisations provide assistance either to medium- and large-sized units, and/or to small-sized units. Originally, IFCI was supposed to assist only large-scale units, but now it provides assistance to medium- and small-scale units too. Industrial Financial Corporation of India earlier used to give assistance only to public limited companies, but now private limited companies, partnership and proprietorship concerns, new entrepreneurs, professional managers and technicians are also covered by its operations. Now, all NBSFOs provide assistance to both private and public sector units.

The financial assistance from NBSFOs is mostly of a medium-/long-term nature although they have now begun supplying short-term/working capital finance also. Industrial Financial Corporation of India is permitted to provide loans up to 25 years; in practice, it has been advancing loans with a maturity of 12–15 years. It has been sometimes felt that these institutions ought to lengthen the maturity period of their loans to 25 years and more.

Loans given by NBSFOs are mostly on a secured basis. Industrial Financial Corporation of India makes mortgage loans with about 50 percent margin; earlier it used to seek guarantees from managing agents before making industrial loans. In the case of SFCs also, loans are secured by pledge, mortgage, hypothecation or assignment of stocks, securities, immovable property and other tangible assets. It has been found that partnership firms, professional managers, technicians and small companies find it difficult to obtain funds from SFCs and other NBSFOs because of their security-oriented lending policies.

Although it is now discouraged by the authorities, NBSFOs, like banks, have practised for a number of years, a 'participation' or 'consortium' approach while giving financial assistance. Under this approach, term-lending institutions (including LIC, UTI) and banks used to share term loans for financing industrial projects; they also used to share in assistance to be given under special schemes introduced by them. The share of each institution in any particular project was decided at the inter-institutional meetings. The institutions had been able to spread and minimise risk, obtain fuller utilisation of their resources and promote co-operation and co-ordination among themselves through this approach. From the point of view of the borrowers also, the approach was a welcome development because in the absence of such an arrangement, as no single institution would be willing to supply the entire amount of capital requirements of a given borrower, he would be required to approach different institutions separately and to go through the entire complex and time-consuming process of loan negotiations with each of them. The consortium approach offered comprehensive financial service to the borrowers.

As part of the participation approach, term-lending financial institutions had introduced 'participation certificates'. The primary objective of these certificates was to simplify and shorten various formalities both at the pre-sanction and post-sanction stages and thereby facilitate the quicker disposal of proposals for institutional assistance for projects up to ₹5 crore. Under this scheme, only one institution (called 'lead institution') used to hold discussions with the applicant for assistance on the viability of a project, financial requirements and also deal with the recovery of loans. This institution used to then sell the participation certificates to other institutions on the basis of either 'participation without recourse' or 'participation with risk'. The sharing used to be for the entire loan assistance, at the same interest rate, and with the same amortisation schedule.

Previously, there used to be a provision in the loan agreement that part of the loan made by the creditor could be converted into equity capital at his option. This was known as 'convertibility option or clause'. Its objective was to enable financial institutions to participate in the management and control of industrial concerns assisted by them, and also in profits made by these concerns. It was meant to check the use of public money by the private sector for making private gain and for increasing its economic power. The measure had become very controversial and was always resisted by the private sector. Although it is used to be introduced in loan agreements, the actual exercise of the option had remained negligible. Now, it is not necessary even to include such an option. In a changed environment of liberalisation and privatisation, it is no longer regarded as appropriate. In any case, when the constitution of many public financial institutions itself is being amended towards privatisation, the clause has lost much of its relevance.

14.5 GROWTH OF FINANCIAL ASSISTANCE SANCTIONED AND DISBURSED BY AIFIs

LO 4

Review the growth of financial assistance sanctioned and disbursed by AIFIs

The financial assistance disbursed in different years has increased phenomenally. The assistance sanctioned and disbursed by major FIs has not followed any particular trend as it has increased for some years and also declined in some other years (Table 14.6).

Table 14.6 Financial Assistance Sanctioned and Disbursed by All Financial Institutions

(Amount in ₹ Billions)

Year	*IFCI*		*SIDBI*		*IVCF*		*TFCI*		*LIC*		*GIC*		*TOTAL*	
	SAN	*DIS*	*SAN*	*DIS*	*SAN*	*DIS*	*SAN*	*DIS*	*SAN*	*DIS*	*SAN*	*DIS*	*SAN*	*DIS*
2003–2004	13.92	2.78	82.46	44.14	—	—	1.11	0.72	93.40	79.54	12.23	12.07	407.59	301.73
2006–2007	10.50	5.50	111.02	102.25	—	—	2.45	1.20	181.27	270.17	7.35	7.40	312.59	386.53
2009–2010	70.07	60.45	355.45	319.42	0.20	0.27	5.70	2.93	630.07	531.49	6.11	6.11	1067.60	920.67
2010–2011	122.60	84.00	422.14	387.96	1.58	1.30	7.38	3.79	438.08	389.05	12.37	12.37	1004.15	878.47
2011–2012	46.74	56.80	433.46	418.12	3.08	2.86	7.80	5.63	531.51	507.09	12.59	12.59	1035.12	1003.09
2012–2013	22.19	15.04	411.20	406.82	2.86	2.81	4.23	3.43	430.14	448.86	17.66	17.66	888.28	894.62
2013–2014	100.98	86.83	530.33	523.21	2.15	2.25	7.67	4.41	342.12	303.78	—	—	983.25	920.48
2014–2015	122.30	86.87	550.39	531.38	4.26	2.98	8.84	5.84	461.63	401.99	—	—	1147.42	1029.06
2015–2016	108.95	74.88	614.83	594.67	4.18	3.47	7.08	4.48	413.11	393.68	0.22	0.22	1148.36	1071.40

Source: RBI, Handbook of Statistics of Indian Economy, 2015–2016. Notes: SAN: Sanctioned, DIS: Disbursed.

14.6 DEVELOPMENT FINANCIAL INSTITUTIONS: PROSPECTS

LO 5
Describe development Financial Institutions

The DFIs have constituted an important source of funds for investment and commercial purposes for small, tiny, cottage, village, medium- and large-scale units in the organised and unorganised sectors, for agricultural and rural development, for export promotion and so on. Certain important changes have taken place in their condition. The rate of growth of their activities has gone down. The relative importance of different types of assistance provided by them has undergone a change. They are widening the scope and coverage of their activities. The sources of their funds have changed. However, it must be realised that all such changes have not taken place to the same degree in the case of all institutions comprising this very important part of the Indian financial system. It must also be realised that the DFI sector does not include only the IDBI, ICICI and IFCI. To say that they are losing ground because the distinction between development and commercial banking has become blurred is not convincing. The developmental role of SFCs, SIDCs, NABARD, EXIM Bank, SIDBI and so on continues to be relevant and important. Merely because the concessional funds from the government, RBI and international multilateral institutions are no longer available to them, these institutions need not cease to be development institutions, and become commercial banks. They can function as development financial institutions on commercial basis in the

manner that such institutions are functioning in the US and other countries. It is interesting to note that notwithstanding withdrawal of concessional sources of funds, the operations of DFIs were not adversely affected during the early years of reforms.

Although the approaches and *modus operandi* of supplying finance have undergone changes, it is to be noted that not only institutions like NABARD, SIDBI, and SFCs operate special tailor-made schemes. The working of DFIs during 1990s including the problems faced by some of them in the recent past clearly point out that to suggest the transformation of these institutions into universal banks because some of them are not doing well as to adopt an ideological approach to the issue. Let us note the developments in the DFI sector during 1990s. First, even though concessional sources of funds for them were phased out, they were not adversely affected during the first half of 1990s. They took advantage of flexibility provided to them in the matter of raising and deploying external commercial borrowings and raised substantial amounts of funds from the international markets. They also took advantage of booming conditions in the domestic capital market and raised significant amount of resources by way of debt and equity at handsome premia. On the asset side, they enjoyed good demand for funds due to acceleration of economic activity in general and industrial sector in particular. In this process, they did reorient their operations by offering innovative products and diversifying their activities into new areas of business.

The sanctions and disbursements by AIFIs have declined significantly only in and after 2000–2001, and it has been so due to: (a) a reduction in the number of project proposals seeking assistance; (b) re-structuring of assets portfolios by DFIs; (c) weak financial position of IDBI and IFCI; and (d) spread of universal banking, particularly the merger of ICICI with ICICI Bank. The problems of IFCI and IDBI have been more due to non-economic factors of mismanagement, corruption, heavy investment in a thoroughly corruption-afflicted project namely, Enron and so on. It would be sad if such factors are made the basis for taking away the role of these institutions as development bodies. Development Financial Institutions are facing the problems due to industrial recession also. Their problems do not mean that they have become unviable organizations as suppliers of medium- and long-term developmental funds. Their problems do not justify that they should be allowed to disappear or wind up their activities. In fact, it is too important for a group of institutions to disappear in the near future. The 'emergence of competitive financial system and financial sector reforms' can lead to changes in DFIs, but they need not result in their disappearance as development finance institutions. It is true that these institutions were set up when the capital markets were relatively underdeveloped and were incapable of meeting the long-term financing needs of the economy adequately. This rationale for the existence of DFIs has not disappeared at all even now. The capital market in India is still utterly incapable of meeting the long-term financial requirements of even the corporate sector. The old financial markets imperfections continue to exist, the SSI sector, agricultural and other priority sectors do not have access to capital market, and they need adequate supply of long-term funds, if the required rate of capital formation is to take place in the economy. Put it differently, a very big 'unsatisfied fringe of long-term borrowers' in the corporate and many other vital priority sectors, which existed and prompted the setting up of DFIs in 1950s and 1960s, exists now also, and it defines the continued role for them at present too. If the emergence of competitive financial system has not rendered co-operative banks irrelevant, why should it make DFIs irrelevant?

SUMMARY

- The Indian financial system has a strong group of financial institutions which are different in nature from banks and other financial intermediaries. We have called them Non-Bank Statutory Financial Organisations (NBSFOs). They are also known as 'development banks', or 'term-lending institutions', or 'special development financial institutions'.
- All these institutions have been set up during the planning era, many of them very recently, mostly by the government and the RBI with the specific purpose of bridging the gap in the supply of long-term funds for fixed capital formation.
- They provide a wide range of fund-based and non-fund-based assistance to the business sector, *viz*., direct rupee and foreign currency loans, direct subscription to and under-writing of industrial securities, guaranteeing loans and deferred payments, re-financing and re-discounting, lease finance, advisory, consultancy and merchant banking services, venture capital, and so on.
- Now all NBSFOs provide assistance to private, joint, co-operative and public sector units of all sizes. Earlier, they provide secured loans mostly of medium- and long-term nature. But now, they provide short-term loans also.
- The extent of re-finance and re-discounting facilities provided by them has declined over the years.
- They have introduced a large number of special schemes of assistance with a view to solving certain specific problems of the industrial sector. However, the approach of supplying funds through schemes has been deemphasised now.
- At end-March 2016, there were four All India Financial Institutions (AIFIs) under the Reserve Bank's full-fledged regulation and supervision *viz*. the Export Import Bank of India (EXIM Bank), National Bank for Agriculture and Rural Development (NABARD), National Housing Bank (NHB) and Small Industries Development Bank of India (SIDBI). Apart from these, there are many NBSFOs exist in India.
- Like banks, they had developed a consortium or participatory approach to their loan business.
- The assistance sanctioned and disbursed by major FIs has not followed any particular trend.

KEY TERMS

Non-Bank Statutory Financial Organisation	Development Financial Institutions	EXIM Bank
All India Financial Institutions	NABARD	IFCI
	NHB	IIBI
	SIDBI	

QUESTIONS

1. Briefly explain the nature and functions of Non-Bank Statutory Financial Organisations (NBSFOs) in India.
2. What are the functions of NABARD?
3. What is the basis on which the statutory financial institutions can be grouped into various classes? Analyse the structure of financial assets of various term lending financial institutions.

4. Highlight the certain features of NBSFOs' assistance briefly.
5. How has the growth of different types of NBSFOs' assistance taken place in India during the period of liberalisation?
6. What are the different sources of funds of the NBSFOs and how they have changed during the recent period?
7. Highlight the major changes in the working of NBSCOs as a part of financial sector reforms.
8. Write notes on the following:
   (i) Financial performance of different NBSFOs.
   (ii) Relationship between the level of stock market activity and the availability of business to NBSFOs.
   (iii) Contribution of NBSFOs to the financing of fixed capital formation.
   (iv) Subsidiaries of Industrial Credit and Investment Corporation of India.
   (v) Objectives of Small Industries Development Bank of India.
   (vi) Functions of State Industrial Development Corporations.
   (vii) Objectives of National Small Industries Corporations.

Part 5

Financial Markets

Financial markets are the important constituents of any financial system. These markets are classified into various types on the basis of the nature of securities traded in that market, maturity period of the securities and so on. Considering all these aspects, this part discusses about the nature, growth and significance of the various financial markets operating in India. First three chapters in this part discuss about the functioning of the short-term markets like call money market, Treasury bill market and other miscellaneous short-term financial markets like commercial papers, certificate of deposits, commercial bills and so on. Other chapters are devoted to the comprehensive analysis of the important concepts, trends, growth and significance of the bond market, stock market and derivatives market in India.

CHAPTERS

15. Call Money Market

16. Treasury Bills Market

17. Miscellaneous Short-term Financial Markets

18. Bond Market

19. Stock Market

20. Derivatives Market

Call Money Market

15 CHAPTER

Learning Objectives

- **LO 1** Know the call money market
- **LO 2** Know call money market in US, UK, and India
- **LO 3** Compare the size of Indian call market *vis-à-vis* US and UK
- **LO 4** Discuss the historical background of call rates
- **LO 5** Review call money rates in India, US, and UK
- **LO 6** Infer the reasons for call rate volatility
- **LO 7** Understand the measures for reducing volatility of call money rate
- **LO 8** Illustrate volatility of call money rate in India

15.1 INTRODUCTION

LO 1
Know the call money market

Call money market is that part of the national money market where the day-to-day surplus funds, mostly of banks, are traded in. Mostly the call money market helps the banks to borrow the money without collateral from other banks to maintain the cash reserve ratio (CRR) with RBI. The loans made in this market are of a short-term nature, their maturity varying between one day and a fortnight. As these loans are repayable on demand and at the option of either the lender or the borrower, they are highly liquid, their liquidity being exceeded only by cash. No collateral is required to carry out the transactions in this market. There is a linkage between call money market with other financial markets. The linkage between the call money and the government securities markets exists, as at times, large positions in government securities are funded through short-term borrowings. The foreign exchange market is affected by the call money market as forward exchange premia is driven by arbitrage condition, with the inter-bank call money market. The aim of this chapter is to explain call money, its market, the volume of call loans, the relation of the call money rate with other short-term interest rates, and the recent developments in the call money market.

Before discussing various aspects of the call money market in India, it is necessary to remember that the nature of this market in different countries varies from each other. Differences in institutional structures account for

differences in the nature, participants, purposes or types of transactions in such markets. All, however, have one common feature: they deal in loans which have a very short maturity and are highly liquid. As R S Sayers has pointed out, 'Everywhere banks look in their assets for a nice combination of profit and liquidity, and this leads to a considerable degree of similarity in balance sheet structures. The similarity cannot amount to uniformity because there is no uniform availability of assets for bankers in different countries.'[1] As the complexity of the call money market is usually lost sight of, we will briefly discuss here the nature of this market in the United States and the UK and then its working in India.

15.2 CALL MONEY MARKET IN THE UNITED STATES

LO 2
Know call money market in US, UK, and India

In the United States there are two markets which can be said to form the call money market: (a) federal funds market and (b) call money market proper, as it is known in the the United States.

15.2.1 Federal Funds Market

Federal funds transaction is defined 'as any transaction between banks involving the purchase (borrowing) or sale (lending) of banks' deposits at Federal Reserve Banks for 1 business day at a specified rate of interest.'[2] The purpose of transactions in this market is to adjust the reserves of banks; and the supply of funds to the market arises out of the reserves of banks with the central banking system. Supply of federal funds arises because some member banks have reserves on a given day in excess of reserve requirements. Demand for funds arises because other member banks have reserve deficits on the same day. The federal funds market affords the bankers maximum degree of flexibility in adjusting their reserve positions so as to come out with a minimum of average daily excess reserves over the course of reserve averaging period.[3] The maturity period of funds is 1 day. There appears to be a difference of opinion with regard to the participants in the market. From the account of Monhollon, while one gets the impression that the transactions are among the member banks alone, Sayers[4] thinks that demand for federal funds is a demand by banks and dealers in government securities; the supply of federal funds is mainly by banks, but dealers in government securities and agents of foreign supply banks may also occasionally supply funds to this market.

15.2.2 Call Money Market Proper

The call loan market in the the United States performs a different and specific function. The call loans 'represent short-term loans by banks to security brokers and dealers for the purpose of financing their customers' purchases of common stock.'[5] Banks' loans to dealers in government securities also form part of the call loans. These loans are secured loans and the call provision allows the termination of the loan by either the lender or borrower on 1 day's notice. The term 'call loans' as it is understood in the United States

[1]Sayers, R S, *Modern Banking*, Oxford University Press, Oxford, 1967.
[2]Monholln, J R, 'Federal Funds' in Fenstermaker, J V, *Readings in Financial Markets and Institutions*, Appleton, New York, 1969, p. 52.
[3]*Ibid.*, p. 53.
[4]*Ibid.*, p. 274.
[5]Federal Reserve Bank of Cleaveland, 'Call loans', in *Fenstermaker*, *op. cit.*

does not include customer borrowings from security brokers, although these latter borrowings are also on a call basis. Similarly, dealers in securities obtain loans from non-financial corporations, miscellaneous lenders such as state and local governments, foreign institutions and insurance companies. Only dealer loans from banks are included under call loans.

In short, in the United States, the call money market comprises an inter-bank call market, and the market between banks on the one hand and security brokers and dealers on the other. Because of the greater sophistication and a finer division of functions and institutional arrangements, different specialised markets are known by different names.

15.3 CALL MONEY MARKET IN THE UNITED KINGDOM

In the UK, the call money market consists of three parts:[6] (a) clearing banks' loans to discount houses; (b) inter-bank loans; and (c) mobilisation of surplus money by discount houses among themselves before they approach the Bank of England for financial accommodation. Between the Bank of England and commercial banks, the existence of an intermediary in the form of discount houses is a peculiar organisational feature of the British money market.

15.3.1 Clearing Banks' Loans to Discount Houses

Commercial banks give loans to discount houses on call basis. These loans are normally repayable when demanded. They are mostly secured loans, being secured against treasury bills or other bills of exchange as collateral. Commercial banks regard these loans as highly liquid because they know that discount houses can repay them when called, as the latter have an access to the Bank of England. Discount houses use call loans for holding bills of exchange, treasury bills and other short-term government paper. Commercial banks are able to settle inter-bank indebtedness[7] daily without impairing their cash ratios by manipulation of their call loans to the discount houses. In other words, call loans in the UK help banks in their reserve adjustment process as the federal funds do in the United States. However, there is this difference that while in the United States, the transactions are between banks, in the UK, they are between clearing banks and discount houses. Apart from borrowings from banks, discount houses bid for marginal funds among themselves before they resort to the discount window at the Bank of England. According to Sayers, this market for funds among discount houses is somewhat similar to the federal funds market in the United States.[8]

15.3.3 Inter-bank Call Market

Inter-bank call market in the UK developed in the 1960s, particularly after 1964. This is a market for lendings and borrowings among Scottish banks, merchant banks, British overseas banks, and foreign banks—all outside the clearing banks which are the major commercial banks in the UK. The clearing banks do not participate in this market. Unlike call loans to discount houses, inter-bank loans are unsecured. These loans may be simply overnight loans or they may be for a period of 6 months, but, generally, they are only for a few

[6]Based on Sayers, *op. cit.*

[7]It arises from the transfer of deposits between persons and different banks. Inter-bank indebtedness is different from inter-bank borrowings referred to later.

[8]Sayers, *op. cit*., p. 273.

days. The transactions in this market are usually, but not always, arranged by brokers. This market has some similarity with the federal funds market in the United States, although the scope of the former is relatively much more restricted because the major commercial banks in the country do not participate in that market.

15.4 CALL MONEY MARKET IN INDIA

In India there are no separate short-term money markets of the types that have been discussed above. S K Muranjan[9] has pointed out that call loans in India are given: (a) to the bill market, (b) for the purpose of dealing in the bullion markets and stock exchanges, (c) between banks, and (d) frequently to individuals of high financial status in Mumbai for ordinary trade purposes in order to save interest on cash credits and overdrafts. Among these uses, inter-bank use has been the most significant and their use on stock exchanges and other markets has been modest. Over a period of time, non-inter-bank uses of call money have further declined in relation to inter-bank transactions. Banks borrow from other banks in order to meet a sudden demand for funds, large payments, large remittances, and to maintain cash or liquidity with the RBI. Thus, to the extent that call money is used in India for the purpose of adjustment of reserves, it is similar to federal funds in the United States; to the extent that call loans are given to security brokers they are similar to call loans proper in the the United States; to the extent that call money is traded among banks, it is similar to the 'outside' inter-bank loans in the UK. As there are no discount houses in India, there is no parallel in India to the loans between commercial banks and discount houses in the UK. Until March 1978, transactions in the call money market were usually effected through brokers. Each day, these brokers obtained information about money on offer and money demanded, and then effected transactions. Since then, however, the RBI has prohibited banks paying brokerage on operations in the call money market as it has stopped payment of brokerage on deposits.

15.4.1 Participation

In the beginning, participants in the call money market were (a) scheduled commercial banks, (b) non-scheduled commercial banks, (c) foreign banks, (d) state, district and urban, cooperative banks, (e) Discount and Finance House of India (DFHI), and (f) Securities Trading Corporation of India (STCI). The DFHI and STCI borrow as well as lend, such as banks and primary dealers, in the call market. At one time, only a few large banks, particularly foreign banks, operated in the call money market. Over time, however, the market has expanded and now small banks and non-scheduled banks also participate in this market. Earlier foreign banks were primarily lenders in this market. However, now their participation as borrowers has increased for meeting CRR requirements. Difficulties in tapping deposits through branch expansion, and an increase in the cost of servicing (FCNR) deposits have also compelled foreign banks to borrow in the call market, converting them from net lenders to net borrowers. Among the large commercial banks, the SBI kept itself away from the call market till 1970 after which it has been regularly participating in this market. Because of its large size and formidable cash position, its participation made the market more active. The SBI group is a major lender but a small borrower in the call market. Over the time owing to the participation of LIC, UTI and other institutions the supply of call loans on the money market by these institutions has been advantageous in certain ways. Earlier, these institutions were keeping their funds with a very small number of big

[9]Muranjan, S K, *Modern Banking in India*, Kamala Publishing House, Bombay, 1952, p. 98, and p. 138.

banks which had a sort of 'monopoly use' of the vast cash resources of these institutions. Through the call market, it has now become possible for many other banks to fall back upon these institutions in times of financial stringency. On the other hand, these institutions now have a greater flexibility in investing their funds. It has also become possible for them to increase the income on their resources thereby benefit the unit and policyholders. Further, continuous participation in the call market by them would help to integrate the long-term and short-term money markets in the economy.

This development, however, raised certain important issues. First, whether institutions with long-term funds should enter at all into the short-term market? From the point of view of solvency or risk, no difficulty is likely to arise by such participation. The problem of matching of maturities becomes difficult when institutions with predominantly short-term liabilities create long-term assets. Similarly, as banks can always approach the RBI as a lender of last resort, the possibility of their not honouring the call provision is extremely remote, which means that the lenders' risk involved in this activity is almost nil. It is also to be noted that call loans by UTI still form an insignificant proportion of its total assets or investible funds in any given year. Second, these institutions' direct participation in the call market along with the growth of the market for participation certificates has a potential for weakening the monetary policy of the RBI. An access to funds by banks outside the banking system means that they can weaken the effect of monetary techniques such as, changes in reserve requirements, bank rate, and selective credit controls.

In this context, the Working Group on the Money Market (Vaghul Working Group) appointed by the RBI in 1987 had recommended that the call market should be the exclusive preserve of commercial banks without any ceiling on call rates. It recommended that LIC, UTI, and others can be temporarily allowed to stay in the call market and that their funds be subject to a ceiling rate of interest of 10 percent per year. The authorities have removed the ceiling on call rate for all the participants but they have not banned LIC, UTI and others from participating in the market. As per the latest RBI policy, LIC, UTI, GIC, IDBI, and NABARD are allowed to participate in the call market and it announced that the access to call market as lenders would be provided to such entities that are able to provide evidence to the RBI about their having bulk lendable resources, and which have no outstanding borrowings from banks. They will be required to observe a minimum size of operations of ₹20 crore per transaction. They can participate with prior permission of the RBI, and only through the DFHI. In 1996-97, the RBI permitted four primary dealers (PDs) to participate in this market as both borrowers and lenders. Seven mutual funds also have been allowed to participate as lenders now. It has been observed that the participation on the supply side of the market has remained limited. There is a view, that there are imperfections in the call market in the sense that only a few cash-rich banks supply funds and they tend to make quick gains by pushing up call rates by forming informal cartels. Another view is that even if cartels may not be existing, there is no call market proper in India because there is a very small group of lenders and a large number of borrowers in this market.

In the recent past, the authorities have initiated certain measures to develop a pure inter-bank call market. With effect from 6 August, 2005, the call money market has become a pure inter-bank market. The participants in call/notice money market currently include scheduled commercial banks (excluding RRBs), co-operative banks (other than land development banks) and primary dealers (PDs), as borrowers and lenders. As on 13 June 2014, the standalone banks and primary dealers, which are existing in India, are as follows: ICICI Securities Primary Dealership Limited, Morgan Stanley India Primary Dealer Pvt. Ltd., Nomura Fixed Income Securities Pvt. Ltd., SBI DFHI Ltd., STCI Primary Dealer Limited, Goldman Sachs (India) Capital Markets Pvt. Ltd., Bank of America, Bank of Baroda, Canara Bank, Citibank N.A, Corporation Bank, HDFC

Bank Ltd., Hong Kong and Shanghai Banking Corp. Ltd. (HSBC), J P Morgan Chase Bank N.A, Mumbai Branch, Kotak Mahindra Bank Ltd., Standard Chartered Bank, Axis Bank Ltd., IDBI Bank Limited, and Deutsche Bank AG. Non-bank institutions (other than PDs) are not permitted in the call/notice money market. The prudential limits in respect of both outstanding borrowing and lending transactions in call/notice money market for scheduled commercial banks, co-operative banks and PDs are given in Table 15.1.

All the money market transactions should be reported on the electronic platform called the negotiated dealing system (NDS). These transactions take place in the OTC market and are required to be reported on FIMMDA platform within 15 minutes of the trade for dissemination of information. They are also to be reported on the clearing house of any of the exchanges for the purpose of clearing and settlement.

Table 15.1 Prudential limits for transactions in call/notice money market

Participants	*Borrowing*	*Lending*
Scheduled commercial banks	On a fortnightly average basis, borrowing outstanding should not exceed 100 percent of capital funds (i.e. sum of Tier I and Tier II capital) of latest audited balance sheet. However, banks are allowed to borrow a maximum of 125 percent of their capital funds on any day, during a fortnight.	On a fortnightly average basis, lending outstanding should not exceed 25 percent of their capital funds. However, banks are allowed to lend a maximum of 50 percent of their capital funds on any day, during a fortnight.
Co-operative banks	Outstanding borrowings of State Co-operative banks/district central co-operative banks/urban co-operative banks in call/notice money market, on a daily basis should not exceed 2.0 percent of their aggregate deposits as at end March of the previous financial year.	No limit.
PDs	PDs are allowed to borrow, on average in a reporting fortnight, up to 225 percent of their net owned funds (NOF) as at end-March of the previous financial year.	PDs are allowed to lend in call/notice money market, on average in a reporting fortnight, up to 25 percent of their NOF.

Source: RBI, Master Circular on Call/Notice Money Market Operations on 1 July, 2014.

15.4.2 Maturity Period and Seasonal Demand

Under call money market, funds are transacted on an overnight basis; under notice money market, funds are transacted for a period between 2 and 14 days and under term money market, funds are dealt for 15 days to 1 year. Money at call and short notice in the balance sheets of commercial banks is a highly liquid asset. Unlike in other countries, call loans in India are unsecured. It is well-known that money and credit situation in India every year is subject to seasonal fluctuations. Unlike in other countries, transactions or trading on the call money market is also believed to be characterised by seasonal variations. The seasonal ups and downs are believed to be reflected in the volume of money at call and short-notice, and call money rates at different times of the year. The seasonal nature of the call money market would be reflected in two indicators: (i) a decline in money at call and short notice should be greater in the slack season than in the busy season of a given year; (ii) an increase in money at call and short notice should be greater in the busy season than in the slack season. The need for call money borrowings is the highest around March every year which may be due to withdrawals of deposits in March to meet year-end tax payments and withdrawals of funds by financial institutions to meet their statutory obligations. Call money borrowings tend to increase when there is an increase in the CRR.

15.4.3 Location

In the beginning, the Call money markets are mainly located in big industrial and commercial centres such as Mumbai, Calcutta, Chennai, Delhi, and Ahmedabad. These are also the places where stock exchanges are located. Among these centres, Mumbai and Kolkata are more significant from the point of view of the size and buoyancy of the market. The predominant role of Mumbai in this context is understandable as the head offices of the RBI, many other banks, LIC and UTI are located there; it also has the biggest stock exchange in the country. There is a tendency for funds to gravitate to Mumbai and Kolkata. The development of a communications system has facilitated some cross-country flow of funds. The geographical integration of call markets, however, is still far from perfect resulting in considerable differences in call rates prevailing in different centres. It has been reported that, apart from the well-recognised markets in big cities, there are a large number of local call markets developed and operated by ingenious local bankers. For example, in Saurashtra in Gujarat when large payments or remittances are to be made, the local banks help each other with overnight funds. Among some banks, there are regular arrangements without the payment of interest. For other banks, the price of overnight money is two paise per 100 rupees per night. When one bank presents a cheque for, say, ₹ five lakh to another bank which has no funds, the paying banker approaches the collecting banker to let the funds remain with it overnight and pays at the rate of interest just mentioned.

15.4.4 Variations in Demand and Supply of Call Loans

Variations in the volume of demand for and supply of call loans are caused by many factors. The resources position of the banking system in a given period is important in this regard. The most significant factor determining the resources position of the banking system is the extent of deposits accrual. Increase in deposits with banks, other things being equal, would induce banks to explore possibilities of investment. Since call loans are one of the avenues for investment, the supply of call loans would increase when there is an increase in deposits. It is to be noted that if deposits accrue to all banks, it is unlikely that inter-bank call loan would increase. In a case such as this, the supply of funds to the outside (of the banking system) borrowers would increase. One can, however, visualise a differential growth in the deposits of different banks as a result of which the volume of inter-bank call loans would tend to increase. The demand for call loans would depend upon the buoyancy of the stock market and the increase in demand for loans for industrial and commercial purposes. The size of call loans is also determined by the possibility of quick investment or liquidation of government securities, treasury bills, and other short-term investments. It has been observed that, when subscriptions to government loans open, the demand for call loans tends to increase.

Demand for call money tends to broaden in December, March and June, that is, when quarterly advance tax payments are to be made. The speed with which the remittance and clearance system in the country works also has a great determining impact on the day-to-day volume of call loans. The policy of the RBI in respect of its loans to banks and the implementation of the reserve ratio requirements is another important factor having a bearing on the banks' decision to borrow on the call market. When the banks have a liberal access on cheap terms to the discount window of the RBI, their need to resort to the call market would be relatively less. On the other hand, in a period of restrictive monetary policy, banks would attempt to utilise their resources among themselves more efficiently. Similarly, it has been observed that the system of maintaining reserves on a weekly basis, coupled with the manipulation of the statutory liquidity ratio, makes banks operate in the call money market as lenders and borrowers. In addition, the pressure on the market reaches a peak towards

the end of the banking week, that is, on Friday, when there is a scramble for funds to make up the shortfall in the amount of required reserves. As we shall see, the foreign exchange market activity has also become a significant determinant of the call market activity in India in recent years.

15.5 SIZE OF THE CALL MONEY MARKET IN INDIA

Table 15.2 shows the average daily turnover of call money market in India during the period 1997–1998 to 2015–2016. It is found that call money market turnover has not followed a particular trend and it has been highly fluctuating during the above-mentioned period. It has been highest in the year 2000–2001 and lowest in 2004–2005. It could be due to the increase in the relative size of the collateralised markets such as Collateralized Borrowing and Lending Obligations (CBLO) market, market repo and term money market *vis-à-vis* the uncollateralised market like call money market. The analysis on these markets is given in the later part of the chapter.

Table 15.2 Average daily turnover of call money market

Year	*Amount (₹Crore)*
1997–1998	22709
1998–1999	26500
1999–2000	23161
2000–2001	32157
2001–2002	36144
2002–2003	29421
2003–2004	17191
2004–2005	14170
2005–2006	17979
2006–2007	21725
2007–2008	21393
2008–2009	22436
2009–2010	15924
2011–2012	23070
2012–2013	21700
2013–2014	30230
2014–2015	25570
2015–2016	26950

Source: RBI, Bulletins, Various Issues.

15.6 SIZE OF INDIAN CALL MARKET *vis-à-vis* THE UNITED STATES AND THE UNIDED KINGDOM

LO 3

Compare the size of Indian call market *vis-à-vis* US and UK

The size of the call market in India has been smaller than that of the United States and UK. This could have been due to the following factors among others. First, the bill market in India is underdeveloped and so the call loans to the bill market cannot but be small. The volume of call loans depends upon the

extent of trading in bills of exchange, treasury bills, and so on. Wherever these markets are developed, the amount of call loans demanded and supplied is also large. In addition, banks in India are not inclined to offer loans to brokers and dealers in bills and securities.[10] Second, unlike in the UK, direct discounting facilities with the RBI are available to banks as a result of which they have much less need for loans from the money market. Further, Indian commercial banks hold fairly large cash reserves; therefore, their need to borrow in the call market is much less. Third, unlike in the United States, loans to security dealers cannot be large for certain reasons. Government securities are directly sold by the RBI or to the RBI without much intervention by brokers and dealers. The volume of industrial securities traded on the stock exchanges is also relatively small. Further, any large-scale financial support by banks to stock exchanges cannot be appreciated in the Indian milieu. There are also several regulations which have been imposed by the RBI on banks in respect of advances against shares. Therefore, much of the trading activity on stock exchanges in India is undertaken by the members using funds which are mostly derived from private sources.

15.7 CALL RATES

The rate of interest paid on call loans is known as call rate. The call rate is highly variable from day to day, and often from hour to hour. It is very sensitive to changes in demand for and supply of call loans.

15.7.1 Historical Background

LO 4
Discuss the historical background of call rates

The call rate in India used to be determined until 1973 by market forces. On account of the RBI's policy of credit squeeze introduced in May 1973 in the form of raising the bank rate and tightening of refinance and rediscount facilities, the call rate had reached as high a level as 30 percent in December 1973. As this was truly an alarming level for any short-term rate of interest to reach, and as banks defaulted in a major way in respect of cash and liquidity requirements at that time due to the prohibitively high cost of call money, it became necessary to regulate call rates within reasonable limits. Therefore, the Indian Banks' Association (IBA) in 1973 fixed a ceiling of 15 percent on the level of call rate. This was a sort of informal arrangement for regulating the level of interest rate and had no legal sanction. Since then, the IBA lowered this ceiling of 15 percent to 12.5 percent in March 1976, 10 percent in June 1977, 8.6 percent in March 1978, and 10.0 percent in April 1980. The actual level of the call rate in India since 1973 had remained within the ceiling fixed by the IBA from time to time. Many large banks had been unable to get funds due to the ceiling rate in the call market. Subsequently, the call rate was freed from the ceiling in two stages: Effective from October 1988, the operations of DFHI were exempted from the ceiling. Further, with effect from May 1, 1989, the ceilings on the call rate and inter-bank term money rate were withdrawn. As a result, the call rate has been freely determined by the market forces since 1989. Mostly, the call rate in India is defined as **inter-bank call rate**.

[10]Muranjan, *op. cit*., p. 143.

15.7.2 Call Money Rate in India

LO 5
Review call money rates in India, US, and UK

Table 15.3 presents the call rate (Mumbai) in relation to the bank rate and repo rate. The call money rate generally changes with the repo rate as repo rate is the only policy rate used by the RBI currently. The operating framework of monetary policy is based on the short-run equilibrium in the money market. Therefore, bank rate has not been used as one of the monetary policy instrument by the RBI recently. The detailed discussion on this issue has been provided in Chapter 6. The call money rate has been varied between 2.75 and 17.73 percent during 1955–56 to 2015–2016. During the period 2000–2001 to 2015–2016, the call money rate has been stable and within the corridor that is, between the reverse repo rate and marginal standing facility rate Table 15.3 presents the call rate (Mumbai) in relation to the bank rate and repo rate. The call money rate generally changes with the repo rate as repo rate is the only policy rate used by the RBI currently. The operating framework of monetary policy is based on the short-run equilibrium in the money market. Therefore, bank rate has not been used as one of the monetary policy instrument by the RBI recently. The detailed discussion on this issue has been provided in Chapter 6. The call money rate has been varied between 2.75 and 17.73 percent during 1955–56 to 2015–2016. During the period 2010–11 to 2015–16, the call money rate has been stable and within the corridor, that is, between the reverse repo rate and marginal standing facility rate.

Table 15.3 Call rates in India **(annual averages)**

Year	*Inter-bank rate (Mumbai)*			*Bank rate*	*Repo rate*	*Reverse repo rate*	*MSF rate*
	Average	*High*	*Low*				
1955–1956	2.75	—	—			—	—
1960–1961	4.24	—	—	4.00	—	—	—
1965–1966	6.26	—	—	6.00	—	—	—
1970–1971	6.38	—	—	6.00	—	—	—
1975–1976	10.55	—	—	9.00	—	—	—
1980–1981	7.12	—	—	10.00	—	—	—
1985–1986	10.00	—	—	10.00	—	—	—
1990–1991	11.49	—	—	10.00	—	—	—
1995–1996	17.73	41.62	7.64	12.00	—	—	—
2000–2001	9.15	35.00	0.20	7.00	8.75	—	—
2005–2006	5.60	8.25	0.60	6.00	6.75	5.50	
2010–2011	5.75	12.00	0.25	6.00	6.75	5.15	9.00
2011–2012	8.22	15.00	0.70	6.00	7.50	6.60	9.00
2012–2013	8.09	18.00	5.00	9.00	7.50	6.60	9.00
2013–2014	8.28	35.00	0.50	9.12	7.62	6.62	9.12
2015–2015	7.97	25.00	0.25	8.62	7.62	6.62	8.62
2015–2016	6.98	16.00	2.50	7.66	6.83	6.00	7.66

Source: RBI, Handbook of Statistics, Various Issues.

15.8 CALL RATES AND BANK RATES IN THE US AND UK

Table 15.4 shows the pattern of call money rates and bank rates in the United States and UK during 2004 2013. In UK, overnight inter-bank average lending rate has changed from 4.36 percent in the year 2004 to 0.82 percent during the year 2013 and the bank rate has changed from 4.39 to 0.5 percent during the said period. In the United States, the federal fund rate has varied between 0.11 and 5.02 percent during the period 2004 2013. It reached its lowest during 2013 and highest during 2007. After that, it has come down drastically, which means that the liquidity position in the market has continuously declined. It can be observed that the discount rate varied between 5.85 and 0.5 percent during 2004–2013.

Table 15.4 Call rates and bank rates in the United States and UK (percentage per annum)

Year	*The United States*		*UK*	
	Federal fund rate	*Discount rate*	*Inter-bank lending rate*	*Bank rate*
2004	1.35	2.34	4.36	4.39
2005	3.22	4.19	4.68	4.65
2006	4.97	5.96	4.67	4.64
2007	5.02	5.86	5.58	5.51
2008	1.96	2.39	3.10	4.68
2009	0.16	0.50	1.37	0.64
2010	0.18	0.72	1.50	0.5
2011	0.10	0.75	1.88	0.5
2012	0.14	0.75	1.01	0.5
2013	0.11	0.75	0.82	0.5

Source: Bank of England and Federal Reserve Bank Statistics.

15.9 REASONS FOR CALL RATE VOLATILITY

LO 6
Infer the reasons for call rate volatility

The volatility of the call rate can be attributed to factors such as the following:

(a) Large borrowings on certain dates by banks to meet the CRR requirements and sharp reduction in the demand for call money once CRR needs are met. The call rates rise sharply in the first week of the reporting fortnight, and subside in the second week when banks have covered their cash reserve requirements.

(b) The credit operations of certain banks tend to be much in excess of their own resources. These banks with overextended credit position treat call market as a source of funds for meeting structural disequilibria in their sources and uses of funds.

(c) The occasional factors in the market also affect the volatility. For example, in the recent past, the call rate had shot up due to disruption in the banking industry.

(d) The withdrawal of funds by institutional lenders to meet their business needs, and by the corporate sector for payment of advance tax leads to steep increase in the call rate.

(e) The liquidity crisis or illiquidity in money markets also contributes to the call rate volatility. Banks invest funds (when call market is easy) in government securities, units, and public sector bonds in order to maximise earnings from their funds management. But with no buyers in the markets, these instruments tend to become illiquid which accentuates liquidity crisis in the call market pushing up the call rate significantly.

(f) The mismatch between assets and liabilities of commercial banks arising out of massive demand for non-food credit as against sluggish growth in bank deposits is another relevant factor.

(g) In the recent past, the forex market and call money market have become quite closely interlinked; the changes in the former have come to affect the latter significantly. The sharp increases in call rates on 3 November, 1995, and again between the middle of February to the middle of March, 1996 were largely due to the turbulence in the forex market, and the RBI intervention in the forex market. The RBI intervention in order to prevent the unusual depreciation of the rupee, and the temporary withdrawal of the money market support so as to first stabilise the forex markets have become important factors behind the flaring of call rates in the recent past.

(h) The technical modalities of the calculation of reserves requirements also leads to sharp swings in the call rate.

(i) The structural deficiencies in the banking system and the practice of the banks to window-dress their deposits also have been the important contributory factors in this context. The banking system tries to build up deposits towards the end of the year and in some cases, an increase in deposits in a week towards the end of the year is greater than an increase in them in the whole year.

15.10 MEASURES TAKEN TO REDUCE VOLATILITY OF CALL MONEY RATE

LO 7
Understand the measures for reducing volatility of call money rate

The central bank has taken certain steps to reduce the volatility of call money rates in India. All the measures are as follows: (a) intervention by the DFHI has increased, (b) more funds have been channelized by the RBI through the DFHI, and (c) funds are channelized by certain financial institutions with surplus funds, (d) penalties on CRR shortfalls are softened, (e) the liquidity adjustment facility was introduced from June 2000 onwards to manage short-term liquidity under different financial market conditions and to maintain stability in the money market, and (f) inter-bank liabilities were freed from reserve requirements in 1997.

15.11 VOLATILITY OF CALL MONEY RATE IN INDIA

LO 8
Illustrate volatility of call money rate in India

The volatility in call money rates has reduced after the introduction of LAF and the setting up of an informal corridor of reverse repo and repo rates. The lower volatility is in consonance with the Reserve Bank's emphasis on financial stability as a key consideration of monetary policy (Tables 15.5).

Table 15.5 Volatility in the call money market (percentage)

Item	*April 1993–March 1996*	*April 1996–March 2000*	*April 2000–March 2007*	*April 2007–March 2013*
Average	11.1	8.0	6.3	6.4
SD	6.7	3.7	1.9	1.8
CV	0.6	0.6	0.3	0.28

Source: Calculated from the Monthly Data Collected from RBI, Handbook of Statistics, Various Issues.

15.12 MUMBAI INTER-BANK BID RATE (MIBID) AND MUMBAI INTER-BANK OFFER RATE (MIBOR)

As the financial markets started developing in the country, the need for a reference rate in the money market was felt. Then the National Stock Exchange (NSE) developed Mumbai inter-bank bidrate (MIBID) and Mumbai inter-bank offer rate (MIBOR) for the money market and it was launched on 15 June, 1998 as an overnight rate. It is the interest rate at which banks can borrow funds, in marketable size, from other banks in the Indian inter-bank market. It is calculated daily by the National Stock Exchange of India (NSE). This rate is given to first class borrowers and lending institutions, and is based on an average of lending rates offered by major banks throughout India. It is calculated on the basis of data collected from the panel of 30 banks and primary dealers. The panel has a mix of public sector banks including SBI, CBI; private sector banks including Axis Bank Ltd, HDFC Bank Ltd; foreign banks including Citibank NA and Deutsche Bank; and primary dealers including ICICI Securities Ltd and PNB Gilts Ltd.

The rates are then calculated by a combination of two methods—polling and bootstrapping. In the polling method, the rates are taken from a few market participants and the reference rates are arrived at. However, there is no guarantee that participants will give real and honest rates, therefore, in India, polling is combined with bootstrapping. Bootstrapping is a statistical method that basically reduces the noise and identifies the outliers in the data collected from market participants. The combination is said to be better than applying the polling method alone. It is also expected to help against any attempt by the market participants to come together and influence rates. The rates are published at the NSE website and news agencies. Over the time, certain developments have taken place in this regard. The NSE launched the 14-day MIBOR on 10 November 1998 and the 1-month and 3-month MIBORs on 1 December, 1998. Further, the exchange introduced a 3-day FIMMDA-NSE MIBID-MIBOR on all Fridays with effect from 6 June, 2008 in addition to existing overnight rate. Currently, the rate is issued for some floating rate debentures and forward contracts. However, as the corporate debt market is developing in India, with increased domestic and international participation, MIBOR will become more significant. The MIBOR (along with MIBID) rate is used as a bench mark rate for majority of deals struck for interest rate swaps, forward rate agreements, floating rate debentures and term deposits in Indian markets.

15.13 LONDON INTER-BANK OFFER RATE (LIBOR)

It is an interest rate at which banks can borrow funds in marketable size from other banks in the London inter-bank market. The LIBOR is fixed on a daily basis by the British Bankers' Association (BBA). Every morning

banks work out how much money they need to borrow from their peers to plug any holes in their balance sheets or, if they have an excess of available cash, how much they can afford to lend. LIBOR formally measures the cost of this inter-bank lending and setting out the average rate banks pay to borrow from one another. It is a very popular benchmark and is issued for the United States Dollar, GB Pound, Euro, Swiss Franc, Canadian Dollar and the Japanese Yen.

There are 150 different LIBOR rates calculated on a daily basis by Thomson Reuters for 15 borrowing periods ranging from overnight to a year, spanning 10 different currencies. These rates are calculated based on data submitted by a panel of major banks (the number of banks on the panel varies according to the currency). The UK's sterling rate is based on submissions from 16 banks, and the United States dollar rate on the other hand, is calculated using a panel of 18 banks. Each bank is asked the same question, that is, if you need to borrow cash from your fellow banker friends, how much would they charge you for it? Once the rates are submitted, the four highest and the four lowest rates are ignored, and the average of those left are used to calculate the LIBOR rate which, along with the individual rates submitted by each bank, are then published before midday UK time every weekday. It is also widely used as a reference rate for many financial instruments in both financial markets and commercial fields. The LIBOR is the world's most widely used benchmark for short-term interest rates. Complex derivative products used by professional traders in the multi-trillion-pound bond and currency markets are commonly priced using LIBOR.

Table 15.6 shows the trends in the average MIBID, MIBOR and LIBOR rates during the period 1998–2013. It is found that relatively the LIBOR rates have been lower than the MIBOR and MIBID rates for the same maturity. It could be due to the different demand and supply of funds available for borrowing and lending. As all are the short term interest rates, they are highly fluctuating during the said period and there has been a wide range of variation between the highest and the lowest rates for all three types of rates.

Table 15.6 MIBID, MIBOR and LIBOR Rates (annual averages percentage)

Year	*MIBID*		*MIBOR*		*LIBOR*	
	1-month maturity	*3-month maturity*	*1-month maturity*	*3-month maturity*	*1-month Maturity*	*3-month maturity*
1998	9.25	10.08	9.95	11.04	5.55	5.61
1999	9.28	10.04	10.02	10.81	5.30	5.48
2000	9.44	9.82	10.29	10.71	6.43	6.52
2001	8.02	8.49	8.69	9.18	3.71	3.63
2002	6.48	6.86	6.97	7.42	1.75	1.78
2003	5.02	5.15	5.3	5.52	1.20	1.21
2004	4.63	4.78	5.48	5.08	1.54	1.67
2005	5.32	5.61	5.61	6.01	3.45	3.63
2006	6.55	6.9	7.05	7.44	5.13	5.22
2007	7.35	8.27	8.3	9.11	5.25	5.29
2008	8.37	9.13	9.24	9.92	2.66	2.91
2009	4.15	5.12	4.57	5.57	0.33	0.69

(*Contd.*)

2010	5.35	5.85	5.74	6.29	0.27	0.34
2011	8.6	9.15	8.95	9.51	0.23	0.33
2012	8.99	9.19	9.24	9.48	0.23	0.43
2013	8.85	9.13	9.03	9.32	0.18	0.26
2014	8.52	8.89	8.65	9.01	0.25	0.23
2015	8.59	8.48	8.76	8.64	0.26	0.27

Source: www.nseindia.com, World Street Journal.

15.14 OTHER SHORT-TERM MONEY MARKETS IN INDIA

Apart from call/notice money, another segment of money market has been defined as *term money market* where the tenor of the transactions is from 15 days to 1 year. The gradual phasing out of non-banks from the call money market has led to development of collateralised markets such as the *repo market* and the *collateralized borrowing and lending obligations (CBLO) market*. The migration to the collateralised segments has also reduced the volatility in the overnight money market rates as availability of alternative avenues for mobilising short-term funds has enabled market rates to align with the informal interest rate corridor of repo and reverse repo rate under the liquidity adjustment facility (LAF).

15.14.1 Repo Market[11]

Repo or ready forward contact is an instrument for borrowing funds by selling securities with an agreement to repurchase the said securities on a mutually agreed future date at an agreed price which includes interest for the funds borrowed. The reverse of the repo transaction is called 'reverse repo' which is lending of funds against buying of securities with an agreement to resell the said securities on a mutually agreed future date at an agreed price which includes interest for the funds lent. It can be seen from the definition above that there are two legs to the same transaction in a repo/reverse repo. The duration between the two legs is called the 'repo period'. Predominantly, repos are undertaken on overnight basis, that is, for 1-day period. Settlement of repo transactions happens along with the outright trades in government securities. The consideration amount in the first leg of the repo transactions is the amount borrowed by the seller of the security. On this, interest at the agreed 'repo rate' is calculated and paid along with the consideration amount of the second leg of the transaction when the borrower buys back the security. The overall effect of the repo transaction would be borrowing of funds backed by the collateral of Government securities.

15.14.2 Collateralised Borrowing and Lending Obligation (CBLO)[12]

CBLO is another money market instrument operated by the Clearing Corporation of India Ltd. (CCIL), for the benefit of the entities who have either no access to the inter-bank call money market or have restricted access in terms of ceiling on call borrowing and lending transactions. It was operationalised with effect from 20 January, 2003. It is explained as follows: (i) an obligation by the borrower to return the money

[11]RBI, Government Securities Market in India—A Primer
[12]*Ibid*.

borrowed, at a specified future date, (ii) an authority to the lender to receive money lent, at a specified future date with an option/privilege to transfer the authority to another person for value received, and (iii) an underlying charge on securities held in custody (with CCIL) for the amount borrowed/lent. CBLO is a discounted instrument available in electronic book entry form for the maturity period ranging from 1 to 90 days (up to 1 year as per RBI guidelines). In order to enable the market participants to borrow and lend funds, CCIL provides the dealing system through Indian Financial Network (INFINET), a closed user group to the members of the negotiated dealing system (NDS) who maintain current account with RBI and through Internet for other entities who do not maintain current account with RBI. Membership to the CBLO segment is extended to entities who are RBI- NDS members, *viz.*, nationalized banks, private banks, foreign banks, co-operative banks, financial institutions, insurance companies, mutual funds, primary dealers and so on. Associate membership to CBLO segment is extended to entities who are not members of RBI-NDS, *viz.*, co-operative banks, mutual funds, insurance companies, NBFCs, corporates, provident/pension funds and so on. By participating in the CBLO market, CCIL members can borrow or lend funds against the collateral of eligible securities. Eligible securities are central government securities including treasury bills, and such other securities as specified by CCIL from time to time. Borrowers in CBLO have to deposit the required amount of eligible securities with the CCIL based on which CCIL fixes the borrowing limits. CCIL matches the borrowing and lending orders submitted by the members and notifies them. While the securities held as collateral are in custody of the CCIL, the beneficial interest of the lender on the securities is recognized through proper documentation.

Table 15.7 Average daily turnover of market repo, CBLO and term money markets in India (₹ in Crore)

Year	*Market repo (outside LAF)*	*Collateralized borrowing and lending operation (CBLO)*	*Term money market*
1999–2000	6895	—	—
2000–2001	10500	—	—
2001–2002	30161	—	195
2002–2003	46960	30	341
2003–2004	10435	515	519
2004–2005	17135	6697	525
2005–2006	21183	20039	833
2006–2007	33675	32390	1012
2007–2008	54736	55626	704
2008–2009	57320	61552	794
2009–2010	47706	109125	NA
2011–2012	98680	119630	540
2012–2013	51920	76930	490
2013–2014	74780	83270	940

Source: RBI, Bulletins, Various Issues.

From Table 15.7 it is found that the combined average daily transactions of market repo and collateralised borrowing and lending obligation (CBLO) was proportionately higher than those in the uncollateralised call/notice money market (Table 15.2). It may be noted that after phasing out of non-bank participants, except primary dealers from the call/notice money market, the supply of institutional funds from insurance companies and mutual funds has shifted to the collateralised market, which also offers funds at the rates, generally lower than in call money market. The average turnover of CBLO market has been highest followed by market repo and term money market. The average turnover of term money market has been negligible.

SUMMARY

- The call money market is the market for very short-term funds repayable on demand and with maturity period varying between 1 day and a fortnight.
- Commercial banks and co-operative banks are the major participants on both the supply and demand sides of this market.
- In the United States, the call money market has two components, that is, (a) federal funds market, and (b) call money market proper.
- In the UK , the call money market consists of three parts: (a) clearing banks' loans to discount houses, (b) inter-bank loans, and (c) mobilisation of surplus money by discount houses among themselves.
- With effect from 6 August, 2005, the call money market has become a pure inter-bank market. The participants in call/notice money market currently include scheduled commercial banks (excluding RRBs), co-operative banks (other than land development banks) and primary dealers (PDs), both as borrowers and lenders.
- All the money market transactions should be reported on the electronic platform called the negotiated dealing system (NDS).
- Under call money market, funds are transacted on an overnight basis, under notice money market; funds are transacted for a period between 2 and 14 days; and under term money market the funds are dealt for 15 days to 1 year and call loans in India are unsecured.
- Call money market is mainly located in big industrial and commercial centres like Mumbai, Kolkata, Chennai, Delhi, and Ahmedabad.
- The volume of call loans of scheduled commercial banks has increased significantly over the years.
- The volume of call loans depends on the extent of deposits accrual, the possibility of quick investment in and liquidation of other money market instruments, timing of advance tax payments, seasonal fluctuations in demand for credit, access to RBI refinance, and so on.
- The rate of interest in the call market—call rate—in India was market-determined till 1973. Subsequently, it was subjected to a ceiling fixed by the Indian Banks Association during 1973–1989. This ceiling has been removed with effect from May 1989. After the removal of ceiling, the call rate has fluctuated widely; its volatility has increased over the years.
- The large amount of borrowings by banks on certain dates to meet CRR requirements, overextended credit position of some banks, occasional disturbances in the banking system and money market, sudden withdrawal of funds by financial institutions and business companies, illiquidity in money market, and forex market turbulence are the major factors behind extreme volatility of the call rate.

- The average call money rate has been more or less during the period 2000–2001 to 2012–2013. The average call money rate has been very much volatile during the period.
- The gradual phasing out of non-banks from the call money market has led to development of collateralised markets such as the repo market and the collateralized borrowing and lending obligations (CBLO) market.
- Average daily turnover of market repo, CBLO and term money markets in India have increased in the current period.
- The LIBOR rate has been consistently lower than the call money rate in India.

KEY TERMS

Federal Funds Market
Call Money Market Proper
Inter-bank call market
Primary dealers
Call money rate
Call rate volatility
Mumbai inter-bank offer rate
London inter-bank offer rate

QUESTIONS

1. What is the meaning of the call money market? Briefly discuss the nature of this market in the United States, UK and its working in India.
2. Who are the participants in the call money market? Give a brief idea about the distribution of call loans according to types of participants in this market.
3. Comment on the following statements: Financial Institutions with long-term funds should enter at all into the short-term market. The size of the call money market has increased in India.
4. What are the factors that affect the demand for and supply of call loans?
5. Analyse the trends in different call rates in India.
6. Discuss the factors, which are responsible for the volatility of call rate.
7. Write short notes on following:
   (a) Locations of call money market in India.
   (b) Maturity of call loans in India.
   (c) Difference between the UK and Indian call money market.
   (d) Relation between call rate and bank rate
   (e) Collateralised borrowing and lending operations
   (f) Term money market
   (g) Market repo
   (h) Clearing Corporation of India
   (i) London inter-bank offer rate

Treasury Bills Market

16
CHAPTER

Learning Objectives

- **LO 1** Know treasury bill and the implications of the working of its market for bank deposits and monetary policy
- **LO 2** Identify various types of treasury bills
- **LO 3** List other short-term central government securities
- **LO 4** Explain treasury bill rate
- **LO 5** Understand the calculation of the yield of a treasury bill
- **LO 6** Outline major policy developments and market size of T-bills in India
- **LO 7** Summarise treasury bill rates and its limitations in India

16.1 INTRODUCTION

In this chapter, we will discuss the market for treasury bills (TBs), the main instrument of short-term borrowing by the government. Treasury bills market plays a significant role in the cash management of the government. Developed treasury bills market has been the precondition for effective open market operation by the RBI. Being default risk-free, the yields on treasury bills at different maturities are always used as the benchmark risk-free rate for valuation of other assets in financial markets. It is also one of the important instruments of the central bank to influence liquidity and short-term interest rates. Specifically, we shall discuss the markets for 91-day, 182-day, 364-day and 14-day treasury bills.

16.2 NATURE AND CHARACTERISTICS

A treasury bill is a particular kind of finance bill[1] or a promissory note put out by the government of the country. Treasury bills (T-bills) offer short-term investment opportunities, generally up to 1 year. They are, thus, useful in managing short-term liquidity. Although state governments also issued treasury bills on occasions until 1950, since then it is only the central government that has been selling them. Treasury bills are not self-

[1]A bill which does not arise from any genuine transaction in goods is called a finance bill.

liquidating in the way genuine trade bills are, although the degree of their liquidity is greater than that of trade bills. If one were to arrange short-term financial instruments according to their liquidity, the descending order would be cash, call loans, treasury bills and commercial bills. Treasury bills are highly liquid because there cannot be a better guarantee of repayment than the one given by the government and because the central bank of the country is always willing to purchase or discount them. As unlike ordinary trade bills, treasury bills are claims against the government, they do not require any grading or further endorsement or 'acceptance'. Treasury bills are zero coupon securities and pay no interest. They are issued at a discount and redeemed at the face value at maturity. The important qualities of treasury bills are (a) high liquidity, (b) absence of risk of default, (c) ready availability on tap, (d) assured yield, (e) low transactions cost, (f) eligibility for inclusion in statutory liquidity ratio (SLR), and (g) negligible capital depreciation.

16.3 FUNDING OF TREASURY BILLS, BANK DEPOSITS AND MONETARY POLICY

LO 1

Know treasury bill and the implications of the working of its market for bank deposits and monetary policy

It is necessary to understand the implications of the working of the TBs market for the process of multiple deposit creation by banks and for the working of monetary policy. The selling of treasury bills to banks impinges on the working of banks in a significant way. It effects a temporary reduction in bank cash and thereby reduces their credit-creating capacity. But, at the same time, large holdings of TBs by banks create a potentially dangerous situation. Banks can always make up for the loss of cash by rediscounting treasury bills with the central bank or by replenishing cash resources when these bills mature. In India, the fact that during the last decade, particularly since 1974, the size of banks' investment in TBs and the volume of these bills rediscounted by them with the RBI have increased considerably indicates that the danger of undermining monetary policy has also increased. That banks' participation in the TBs market has increased during the period of unprecedented tight money policy itself may be regarded as the reaction of banks to the tight money policy.

The rule that certain liabilities of the government, such as the TBs, should form a part of the minimum reserve ratio to be maintained by banks implies that the creation of TBs will increase the power of deposit creation of banks. How far variations in the volume of TBs will undermine monetary policy will depend upon the extent of the importance of these bills as a part of liquidity ratio. In England, as TBs are of major importance in the prescribed liquidity ratio, changes in their volume are closely related to changes in deposit creation by banks. In India, it is the dated government securities and not so much the TBs which form a large part of the SLR. On this account, therefore, the danger posed by the expansion of the TBs market to the success of monetary policy is relatively less. In order to counteract the threat posed by TBs to monetary policy, the Radcliff Committee recommended the policy of funding, that is, converting TBs into long dated or undated securities.[2] As already explained, funding means an extension in the maturity of government debt, generally involving a reduction in the TBs issued. The outcome of funding operations is a lengthening of maturities of government securities held by the RBI without any change in the quantum of public debt, and an increase in the cost of servicing the debt as a result of the higher interest rate payable on long-term debt. In the context

[2]HMSO, *Radcliffe Committee Report*, London, 1959.

of the categories of public debt such as 'funded debt' and 'floating debt', the former means long dated or undated government securities, while the latter means TBs, and ways and means advances (WMA).

The funding of TBs in India was earlier confined to the *ad hocs* only, but it is no longer so. It has been argued that funding in India is resorted to in order to window-dress the volume of deficit financing because, according to the definition followed by the government, while the net increase in treasury bills (and withdrawals from cash balances) constitutes deficit financing, increase in dated securities held by the RBI does not do so. It has been suggested that since TBs are discounted with the RBI and this amounts to a transfer of credit to the government from commercial banks to the RBI, it would be in the interest of the success of monetary action 'if funded stocks of short and medium maturities instead of so-called treasury bills are made available to banks. Some of the reasons why this cannot be done, and why such a policy is likely to fail are as follows: First, the premise underlying the suggestion is only partly correct. All 'normal' TBs are not discounted with the RBI. Treasury bills discounted with the RBI as a proportion of total outstanding bills with the banks have fluctuated widely. Second, such a policy is likely to reduce the resilience of the money market, and banks may not prefer short-dated securities to TBs. In the absence of well-developed markets for commercial bills and call loans, such a policy would mean that banks would not have any good short-term financial instrument to buy. It may be argued that the void created by the absence of TBs could at least be partially filled if banks are allowed to borrow against the collateral of dated government securities. But banks' borrowings in this manner cannot be equated with the discounting of TBs because the securities pledged have to be redeemed at some time; and if banks are given unlimited access to the RBI credit by way of pledging dated securities, the monetary action would not be aided by the replacement of treasury bills. Third, the issue of treasury bills cannot be entirely looked at from the point of view of monetary policy. There are certain advantages which the government enjoys by issuing treasury bills and it may not be willing to forego them. It raises short-term finance by selling these bills without committing itself to pay high rates of interest over a long period of time.

16.4 TYPES OF TREASURY BILLS

LO 2
Identify various types of treasury bills

Two types of TBs have been in vogue in India so far: ordinary and *ad hoc*. *Ordinary TBs* are issued to the public and other financial institutions for meeting the short-term financial requirements of the central government. These are freely marketable, can be bought and sold at any time and have a secondary market also. On the other hand, *ad-hoc TBs* (also known as *ad hocs* in short) are always issued in favour of the RBI only. They are not sold through tender or auction. They are purchased by the RBI, and the RBI is authorised to issue currency notes against them. They aren't marketable in India. Holders of these bills can always sell them back to the RBI.

The instrument of *ad hoc* treasury bill and the system of issuing it was introduced in India in 1937. As per the agreements made between the GOI and RBI in 1937 and 1955, it was decided that the government shall maintain with the RBI a cash balance of not less than ₹50 crore on Fridays and ₹ four crore on other days, free of obligation to pay interest thereon, and whenever the balance falls below these minimums, the government account would be replenished by the creation of *ad hocs* in favour of the RBI. The system thus put in place was used extensively during the period of World War II; the *ad hocs* were financed by the created money, but they were quickly replaced by borrowing against dated securities from the market. They were also created on

the strength of sterling balances. In short, the arrangements then were such that there were safeguards against imprudent creation of money. The system of *ad hoc* TBs financing became permanent in subsequent years of the planning era. The government issued these bills to replenish their cash balances. They also provided a medium to the state governments, semi-government departments and foreign central banks to invest their temporary surpluses. In a way, they thereby helped to eliminate undesirable fluctuations in the discount rate which would have resulted if the state governments had to compete with regular investors in TBs issued to the public. However, *ad hocs* came to be issued at an unduly low (market unrelated) rate, actually a negative real rate, for a long period of time. The rate of interest on them remained pegged at 4.6 percent for many years. The *ad hocs* became the vehicle for automatic monetisation of the budget deficit.

The GOI and RBI entered into a formal agreement on 9 September, 1994 to phase out the system of *ad hocs*. The agreement provided (a) that at the end of the year 1994–1995, the net issue *ad hocs* would not exceed ₹6000 crore; (b) that the net issue of *ad hocs* should not exceed ₹9000 crore for more than 10 continuous working days at any time during the financial year 1994–1995; (c) that if the issue exceeds this amount, the RBI will automatically reduce the excess by auctioning TBs or floating government securities; (d) that similar ceilings for the net issue of *ad hocs* will be stipulated for 1995–1996 and 1996–1997; and (e) the system of *ad hocs* would be totally discontinued from 1997–1998. How did the agreement work? Within-the-year and end-year, limits were observed in 1994–1995 but not in 1995–1996 and 1996–1997. There were prolonged periods in which intra-year limit was exceeded. Further, the automatic monetisation of deficit could not, in effect, be avoided because the government securities issued to replace *ad hocs* devolved on the RBI quite often during 1995–1996 and 1996–1997.

In keeping with the provisions of 1994 agreement, the GOI and RBI entered into a fresh agreement on 26 March, 1997 which provided (a) that the system of *ad hocs* will be discontinued with effect from 1 April, 1997; (b) that the outstanding *ad hoc* TBs and tap TBs as on 31 March, 1997 would be funded on 1 April, 1997 into special securities without any specified maturity at an interest rate of 4.6 percent per annum; (c) that a system of ways and means advances (WMA) by the RBI to the GOI will be introduced with effect from 1 April, 1997 to accommodate temporary mismatches in GOI receipts and payments, the limit of and interest rate on which will be mutually agreed upon by the GOI and RBI; (d) that when 75 percent of WMA limit is utilised, the RBI will trigger fresh issues of government securities; and (e) that the overdraft will not be permissible for periods exceeding 10 consecutive working days after 31 March, 1999. There is not much substantive difference between the system of *ad hocs* and that of WMA. It has been pointed out that the latter is not a source of financing budget deficit; that it is a mechanism to cover day-to-day mismatches in receipts and payments of the government; that it implies periodic vacation of advances made and not their accumulation year after year. But the 1937 agreement about *ad hocs* also had a similar intention and yet it became a source of funds. There is a great likelihood that WMA also would become a source of funds as it had happened in the case of WMA to the states. It has been further pointed out in favour of WMA that there will be limits on such advances. Again, there were limits on *ad hocs* also as per 1994 agreement, but they were often exceeded in practice.

16.4.1 91-Day, 182-Day and 364-Day Treasury Bills

At present, the Government of India issues three types of treasury bills through auctions, namely, 91-day, 182-day and 364-day treasury bills. Among these 91-day treasury bills are oldest short-term instrument used

by the central government. With a view to widening the short-term money market, and to providing more outlets for temporary surplus funds, the authorities in India had introduced, in November 1986, a major financial innovation in the form of a new money market instrument—the 182-day treasury bill. It was said that the introduction of this bill was a contribution by the GOI towards the development of short-term money market, which also provided an additional avenue for the government to raise financial resources for its budgetary expenditure. From this point of view, the 182-day treasury bill was also a new fiscal instrument. It used to be sold in the market by the RBI in auctions which were monthly in the beginning; they were made fortnightly from July 1988. It is important to note that no specific amount of funds was sought to be raised through the auctions of these bills. The amount raised in each auction depended upon the funds available with the market participants, and the funds they desired to invest in these bills. Thus, the new bill had become a handy instrument for banks, financial institutions, corporate finance managers and so on, to invest their short-term liquid funds. The bills were normally issued at a discount to face value for a minimum of ₹1 lakh and its multiples thereof. These bills were eligible securities for SLR purpose and for borrowing under 'stand-by refinance facility' of the RBI. The 182-day bills could be purchased by any person resident in India, including individuals, firms, companies, banks and financial institutions. But unlike 91-day TBs, they were not purchased by state governments and provident funds. It is also to be noted that the RBI did not purchase these bills at all. The usual participants in the market for this bill were foreign commercial banks, a few Indian scheduled banks, national co-operative development organisation, financial institutions, joint-stock companies, DFHI and others. On the whole, the market for these bills was much narrower than that for 91-day bills. Upon discontinuing the 182-day treasury bill the authorities introduced a new money market instrument, namely 364-day treasury bill with effect from April 1992. Its first auction took place on 28 April, 1992, and since then, it is being auctioned regularly every fortnight. Its features are very similar to those which the 182-day bill had. The RBI does not purchase and rediscount this bill. It has evoked a moderate to good response from the investors, which is reflected in terms of the number of bids and the amount tendered at the time of each auction. The investor response to it appears to depend, among other things, on the uncertainties in the government securities market, variations in the SLR and the yield. The number of bids and amount accepted also have been moderate to large.

16.4.2 14-Day Treasury Bills

With a view to further diversify the TBs market, the authorities have introduced two types of 14-day TBs: One on 1 April, 1997 which is known as intermediate treasury bill (ITB); and the second on May 20, 1997. The ITB has replaced the 91-day tap treasury bill. It is sold only to state governments, foreign central banks and other specified bodies in order to provide them with an alternate arrangement in place of 91-day tap TBs for investment of their temporary cash surpluses. It is issued in a book entry form, that is, by credit to subsidiary general ledger account; it is not transferable; it can be repaid/renewed at par on the expiration of 14 days from the date of issue; the discount rate on it was previously set at quarterly intervals such that the effective yield on it is equivalent to the interest rate on WMA to the Union Government; it is rediscounted at 50 basis points higher than the discount rate, and on rediscounting, it is extinguished. With effect from 13 February, 2012, the discount rate payable on 14-day treasury bills has been fixed at 5 percent and the bills are rediscounted at 50 basis point higher than the discount rate. The surplus cash balances of state governments are automatically invested in 14-day intermediate treasury bills (ITBs).

16.5 OTHER SHORT-TERM CENTRAL GOVERNMENT SECURITIES

Apart from these types of TBs, the RBI also issues two types of short-term securities to finance the short-term liquidity requirements. These two are as follows:

LO 3
List other short-term central government securities

16.5.1 Cash Management Bills (CMBs)

Government of India, in consultation with the Reserve Bank of India, has decided to issue a new short-term instrument, known as cash management bills (CMBs), to meet the temporary mismatches in the cash flow of the government. The CMBs have the generic character of T-bills but are issued for maturities less than 91 days. Like T-bills, they are also issued at a discount and redeemed at face value at maturity. The tenure, notified amount and date of issue of the CMBs depend upon the temporary cash requirement of the Government. The announcement of their auction is made by Reserve Bank of India through a Press Release which is issued 1 day prior to the date of auction. The settlement of the auction is on T+1 basis. The non-competitive bidding scheme has not been extended to the CMBs. However, these instruments are tradable and qualify for ready forward facility. Investment in CMBs is also reckoned as an eligible investment in government securities by banks for SLR purpose under Section 24 of the Banking Regulation Act, 1949. First set of CMBs were issued on 12 May, 2010. After its introduction following a cumulative increase of 125 bps in the repo rate during April–July 2011, money market rates moved in step with the policy rate hikes. The issuances of cash management bills to the tune of ₹58,000 crore during April–July 2011 to meet temporary mismatches between government receipts and expenditure also exerted pressure on money market rates. To improve the efficiency of the auction process of G-secs, *viz.*, Government of India dated securities, treasury bills (T-bills), cash management bills and state development loans, the timings for primary auction under competitive bidding have been revised from 10.30 am–12.30 pm to 10.30 am-–12.00 noon from 13 April, 2012. This will permit more time for secondary market transactions for the securities auctioned on that day.

16.5.2 Ways and Means Advances (WMA)

Under Section 17(5) of RBI Act, 1934**,** the RBI provides ways and means advances (WMA) to the states banking with it to help them to tide over temporary mismatches in the cash flow of their receipts and payments. Such advances, under the Act are repayable in each case not later than 3 months from the date of making that advance. There are two types of WMA—normal and special. While normal WMA are clean advances, special WMA are secured advances provided against the pledge of Government of India dated securities. The operative limit for special WMA for a State is subject to its holdings of Central Government dated securities up to a maximum of limit sanctioned. In addition, the RBI has determined limits for normal and special WMA for each State as multiples of the prescribed minimum balance required to be maintained with the RBI by that State. These limits have been revised periodically.

16.6 INVESTORS AND SALE OF T-BILLS

Banks, primary dealers, state governments, provident funds, financial institutions, insurance companies, NBFCs, FIIs (as per prescribed norms), NRIs and OCBs can invest in T-Bills. Treasury bills are available

for a minimum amount of ₹25,000 and in multiples of ₹25,000. T-bills are sold through auction. Auction is a process of calling of bids with an objective of arriving at the market price. It is basically a price discovery mechanism. There are several variants of auction. Auction can be price-based or yield-based. A *yield-based auction* is generally conducted when a new government security is issued. Investors bid in yield terms up to two decimal places (e.g. 7.49 percent, 8.21 percent and so on.). Bids are arranged in ascending order and the cut-off yield is arrived at the yield corresponding to the notified amount of the auction. The cut-off yield is taken as the coupon rate for the security. Successful bidders are those who have bid at or below the cut-off yield. Bids which are higher than the cut-off yield are rejected. A *price-based auction* is conducted when Government of India re-issues securities issued earlier. Bidders quote in terms of price per ₹100 of face value of the security (e.g. ₹102.00, ₹101.00, ₹100.00, ₹99.00 and so on, per ₹100). Bids are arranged in descending order and the successful bidders are those who have bid at or above the cut-off price. Bids which are below the cut-off price are rejected.

Depending upon the method of allocation to successful bidders, auction could be classified as *uniform price*-based and *multiple price*-based. In a uniform price auction, all the successful bidders are required to pay for the allotted quantity of securities at the same rate, that is, at the auction cut-off rate, irrespective of the rate quoted by them. In other words, all the winning bidders are awarded the auction amount at the same price. The uniform price-based auction process minimizes the uncertainty and encourages broader participation, but it also encourages the irresponsible bidding and reduces the incentive to bid. On the other hand, in a multiple price auction, the successful bidders are required to pay for the allotted quantity of securities at the respective price/yield at which they have bid. In other words, each winning bidder pays the price it bid. The basic merit of this method is that the RBI obtains the maximum price what each participant is willing to pay. It can encourage the bidders to bid as each of them is aware that they will have to pay the price they bid, not the minimum price. This process has certain disadvantages also as it may happen that bidders who paid higher prices could face larger capital losses if the trading in these securities starts below the lowest price set at auction. This is known as '*winner's curse'*.

An investor may bid in an auction under either of the following categories:

(i) **Competitive Bidding:** In a competitive bidding, an investor bids at a specific price/yield and is allotted securities if the price/yield quoted is within the cut-off price/yield. Competitive bids are made by well-informed investors such as banks, financial institutions, primary dealers, mutual funds and insurance companies. The minimum bid amount is ₹10,000 and in multiples of ₹10,000, thereafter. Multiple bidding is also allowed, that is, an investor may put in several bids at various price/yield levels.

(ii) **Non-Competitive Bidding:** With a view to providing retail investors, who may lack skill and knowledge to participate in the auction directly, an opportunity to participate in the auction process, the scheme of non-competitive bidding in dated securities was introduced in January 2002. Non-competitive bidding is open to individuals, HUFs, RRBs, co-operative banks, firms, companies, corporate bodies, institutions, provident funds, and trusts. Under the scheme, eligible investors apply for a certain amount of securities in an auction without mentioning a specific price/yield. Such bidders are allotted securities at the weighted average price/yield of the auction. In the case of auction for treasury bills, the amount accepted for non-competitive bids is over and above the notified amount and there is no limit placed. However, non-competitive bidding in treasury bills is available only to state governments and other select entities and is not available to the co-operative banks. Only one bid is allowed to be submitted by an investor either through a bank or primary dealer.

T-bills auctions are held on the *Negotiated Dealing System (NDS)* and the members electronically submit their bids on the system. Non-competitive bids are routed through the respective custodians or any bank or PD which is an NDS member. The Reserve Bank of India conducts auctions usually every Wednesday to issue T-bills. Payments for the T-bills purchased are made on the following Friday. The 91-day T-bills are auctioned on every Wednesday. The treasury bills of 182 days and 364 days tenure are auctioned on alternate Wednesdays. T-bills of 364 days tenure are auctioned on the Wednesday preceding the reporting Friday whereas 182 T-bills are auctioned on the Wednesday prior to a non-reporting Fridays. The Reserve Bank releases an annual calendar of T-bill issuances for a financial year in the last week of March of the previous financial year. The Reserve Bank of India announces the issue details of T-bills through a press release every week.

16.7 TREASURY BILL RATE

LO 4
Explain treasury bill rate

Treasury bill rate is the rate of interest at which treasury bills are sold by the RBI. The effective return on treasury bills is the discount at which they are sold, and is based on the difference between the price at which they are sold and their redemption value. It used to be an administered as well as the lowest rate of interest until 1993. It increased from 2.52 percent in 1955–56 to 4.60 percent in 1974. However, there had been no change in this rate since that year. It had been completely out of line with other short-term rates such as call money rate and commercial bill rate. In view of the narrow and inactive nature of the TBs market, the Chakravarty Committee and Vaghul Committee[3] had made a number of suggestions to correct the situation. The major suggestion made by them was to deregulate and revise the discount rate suitably upwards with a view to providing an adequate yield to the investor. The Chakravarty Committee had recommended that the discount rate on TBs should provide a yield which is marginally positive in real terms. Suggestions were also made for developing an active secondary market for TBs by providing suitable support to brokers and dealers, and permitting banks also to avail of their services. Such measures were expected to create a more active and wider market for TBs, which could provide an additional avenue for open market operations. In this context, the major step was taken with effect from 1 January, 1993. The system of fixed rate of discount of 4.6 percent on 91-day TBs was replaced by the system of flexible interest rate on them. After a prolonged period of almost 20 years (1974–1993), the TB rate became market-determined.

16.8 HOW IS THE YIELD OF A TREASURY BILL CALCULATED?

LO 5
Understand the calculation of the yield of a treasury bill

It is calculated as per the following formula:

$$\text{Yield} = \frac{100 - P}{P} \times \frac{365}{D} \times 100$$

where P = purchase price, D = days to maturity

Day Count: For treasury bills, D = (actual number of days to maturity/365)

[3]RBI, *Report of the Working Group on the Money Market*, (Vaghul Working Group), Bombay, 1987.

Example Assuming that the price of a 91-day treasury bill at issue is ₹98.20, the yield on the same would be as follows:

$$\text{Yield} = \frac{100 - 98.20}{98.20} \times \frac{365}{91} \times 100 = 7.3521\%$$

After say, 41 days, if the same Treasury bill is trading at a price of ₹99, the yield would then be

$$\text{Yield} = \frac{100 - 99}{99} \times \frac{365}{50} \times 100 = 7.3737\%$$

Note that the remaining maturity of the treasury bill is 50 days (91 – 41).

16.9 MAJOR POLICY DEVELOPMENTS IN TREASURY BILLS MARKET IN INDIA

LO 6

Outline major policy developments and market size of T-bills in India

- The instrument of *ad hoc* treasury bill and the system of issuing it were introduced in India in 1937. As per the agreements made between the GOI and RBI in 1937 and 1955, it was decided that the government shall maintain with the RBI a cash balance of not less than ₹50 crore on Fridays and ₹4 crore on other days free of obligation to pay interest thereon, and whenever the balance falls below these minimums, the government account would be replenished by the creation of *ad hocs* in favour of the RBI.
- In the mid-1960s, the auction system for the issue of 91-day T-bills was replaced by on-tap bills. Until 1974, the tap bills rate changed with changes in the bank rate which sustained the interest of the participants in the T-bills market.
- After 1974, the discount rate on *ad hoc* and tap bills was fixed uniformly at 4.6 percent.
- *Ad hoc* treasury bill was abolished on 1 April, 1997 and the new system of wage and means advances is introduced.
- With the discontinuance of *ad hoc* treasury bills, the system of 91-day tap treasury bills was also discontinued with effect from 1 April, 1997.
- The interest in T-bills revived with the introduction of the 182-day T-bills on an auction basis in November 1986. Initially it was sold in the market by RBI at the beginning of every month. In July 1988, they were made fortnightly.
- The 182-day T-bills were discontinued from 16 October, 1992 and replaced by the 364-day auction T-bills (ATB) in April 1992 as part of reform measures.
- After the introduction of 364-day treasury bills, 14-day treasury bills were introduced. These bills are of two types: one was intermediate treasury bills (ITB) issued on 1 April, 1997 and the other was Auction T-bills (ATB) issued on 20 May, 1997
- The ITB has replaced the old treasury bills of 91 days. State government, foreign central Banks and other specified bodies are entitled to buy these intermediate treasury bills as an alternative arrangement in place of 91-day treasury bills for investing their temporary cash surpluses.
- The first auction took place in 6 June, 1997 and the amount outstanding at the end of March 2003. These bills are discontinued by RBI since 2002 and 2003.
- In May 1999, 182-day T-bill was reintroduced and again it was discontinued from May 2001 to March 2005 and again it was reintroduced in April 2005.

16.10 SIZE OF THE T-BILLS MARKETS IN INDIA

Tables 16.1, 16.2 and 16.3 show the trends in the auction of 91-days, 182-day and 364-day treasury bills market in India. It is evident from Table 16.1 during the period 1992–1993 to 2012–2013 that there is an increasing trend in the receipt of both competitive and non-competitive bids and the ratio of bids accepted to bids received has been varied between 33 and 65 percent. Increasing trend in the auction of the non-competitive bidding implies the relative importance of the 91-day treasury bills for the retail investors. The outstanding amount of 91-day treasury bills has also been increasing, which implies the importance of 91-day treasury bills in the money market operation in India.

Table 16.1 Auction of 91-day treasury bills **(in ₹ crore)**

Year	*Bids accepted (BA)*		*Total*	*Bids received (BR)*		*Total*	*BA/BR (%)*	*Outstanding at the end of the year*
	Competitive	*Non-competitive*		*Competitive*	*Non-competitive*			
1992–1993	203.10	—	203.10	494.10	—	494.10	41.40	1350.00
1993–1994	15511.50	—	15511.50	41609.40	—	41609.40	37.27	6050.00
1994–1995	8124.70	1471.00	9595.70	17623.00	1722.00	19345.00	49.62	750.00
1995–1996	11956.00	4199.92	16165.71	18325.39	8061.02	26386.41	61.26	6500.00
1996–1997	14758.20	6551.00	21309.20	14780.40	37094.28	51874.70	41.07	4231.00
1997–1998	4235.45	7006.33	11241.78	10067.59	9839.82	19907.41	56.00	1600.00
1998–1999	6576.00	5597.00	12173.00	13109.00	5597.00	18706.75	65.07	1500.00
1999–2000	3650.00	2955.00	6605.50	8734.00	3035.00	11769.50	56.00	1520.00
2000–2001	4415.00	2405.00	6820.00	10025.00	2405.00	12430.00	55.00	2280.00
2001–2002	12100.00	7665.89	19765.89	28089.50	7665.89	35755.39	55.00	5000.00
2002–2003	20090.00	6312.12	26402.12	51286.79	7177.12	58463.91	45.15	9627.12
2003–2004	34500.00	2785.56	37285.56	89906.00	2785.56	92691.56	40.22	7121.54
2004–2005	95455.00	6762.03	102217.03	236270.42	1239.10	237509.52	43.03	27916.93
2005–2006	74056.63	25242.70	99299.33	189966.24	25242.69	215208.33	46.14	16318.00
2006–2007	74221.61	57355.11	131576.72	168643.16	57355.11	225998.27	58.22	45229.00
2007–2008	109341.12	101023.83	210364.95	301904.65	101023.83	402928.48	52.20	39957.00
2008–2009	199000.00	66558.62	265558.62	519301.34	66559.62	585860.96	45.32	75549.00
2009–2010	296500.00	5003.00	301503.00	884677.64	5003.00	889680.64	33.88	71503.00
2010–2011	219000.00	38983.10	257983.10	593323.10	38983.10	632306.20	40.80	70345.00
2011–2012	339841.00	114962.30	454803.30	902379.00	114962.30	1017341.30	44.70	124410.00
2012–2013	346657.20	196268.30	542925.50	1255447.69	196268.30	1451905.99	37.39	105096.00
2013–2014	316346.00	263723.00	580069.00	1007826.00	263676.00	1271502.00	45.62	725484.00
2014–2015	422874.00	247441.00	670315.00	1457708.00	247441.00	1705149.00	39.31	864587.40

Source: RBI, Handbook of Statistics of Indian Economy.

Table 16.2 provides the data for the auction of 182-day treasury bills. It is found that although the importance of 91-day treasury bills has been more then 182 days, the auction of this type of treasury bills has been increasing over the years and the percentage of bids accepted of the total bids received has been varied between 32 and 79 percent. But the trend has concluded that the percentage of bids accepted to total bids received has declined in the recent period and the amount of non-competitive bids for 182-day treasury bills has been quite low in comparison to competitive bids. This implies that still now this type of treasury bills is not popularly demanded by the retail investors. It could be due to the less developed market or it does not fulfill the certain objectives of the investors.

Table 16.2 Auction of 182-days treasury bills **(in ₹ crore)**

	Bids accepted (BA)		*Total*	*Bids received (BR)*		*Total*	*BA/BR (%)*	*Outstanding at the end of the year*
	Competitive	*Non-competitive*		*Competitive*	*Non-competitive*			
1987-–1988	NA	NA	329.66	NA	NA	653.96	50.40	132.80
1988-–1989	NA	NA	1371.60	NA	NA	2141.11	64.06	566.50
1989-–1990	NA	NA	1740.15	NA	NA	2364.20	73.60	774.30
1990-–1991	NA	NA	3425.93	NA	NA	4336.43	79.00	1077.59
1991-–1992	NA	NA	7317.72	NA	NA	13694.32	53.40	3985.52
1992-–1993	NA	NA	245.00	NA	NA	538.00	45.50	3935.57
1999–2000	1655.00	600.00	2255.00	NA	NA	3038.50	95.44	1300.00
2000–2001	2349.00	0.00	2349.00	NA	NA	5676.00	46.00	1300.00
2001–2002	NA	NA	300.00	NA	NA	731.50	41.00	NA
2005–2006	24578.00	2250.00	26828.87	69423.00	2317.00	71740.00	37.40	9771.00
2006–2007	29125.00	7787.00	36912.25	66647.00	7787.00	74434.00	49.60	17206.00
2007–2008	36105.00	7321.00	46426.44	108388.00	7321.00	115709.00	43.30	16785.00
2008–2009	46000.00	8303.00	44303.00	105206.00	8303.00	113509.00	39.00	20175.00
2009–2010	42500.00	375.00	42875.00	119411.00	375.00	119786.00	38.20	21500.00
2010–2011	42000.00	1301.00	43301.00	127843.00	1301.00	129144.00	34.90	22001.00
2011–2012	89950.00	3651.00	93601.00	245127.92	3651.25	248779.17	37.60	52201.00
2012–2013	129192.00	242.00	129434.00	396358.00	242.00	396600.00	32.63	64196.00
2013–2014	129000.00	8520.00	137520.00	426022.00	8520.00	434542.00	31.64	161582.40
2014–2015	145638.00	1972.00	147610.00	429170.00	1972.00	431142.00	34.23	193856.50

Source: RBI, Handbook of Statistics of Indian Economy.

From Table 16.3, we find that the importance of 363-day treasury bills has been increasing continuously, but the percentage of bids accepted to total bids received has declined in the recent years. The auction of non-competitive bidding of 364-day treasury bills has been started late in comparison to other two types of treasury bills and the amount of bids received in the form of non-competitive bidding has increased during the period 2005–06 to 2006–07 and then it has shown a fluctuating trend. But in the recent years the amount

has been quite low in comparison to the previous years. The total outstanding amount of TBs has increased continuously during the said period and at present, 364-day TBs account for the major proportion of the outstanding TBs (Table 16.3).

Table 16.3 Auction of 364-days treasury bills **(in ₹ crore)**

	Bids accepted (BA)			*Bids received (BR)*		*Total*	*BA/BR (%)*	*Outstanding at the end of the year*
	Competitive	*Non competitive*		*Competitive*	*Non competitive*			
1992–1993	NA	NA	8796.47	NA	NA	14709.09	60	8796.47
1993–1994	NA	NA	21019.76	NA	NA	46927.36	45	8385.97
1994–1995	NA	NA	16857.00	NA	NA	30727.22	55	8163.12
1995–1996	NA	NA	1874.70	NA	NA	3370.94	55	1874.00
1996–1997	NA	NA	8240.60	NA	NA	15244.90	54	8240.00
1997–1998	NA	NA	16246.60	NA	NA	25246.63	64	16246.00
1998–1999	NA	NA	10200.00	NA	NA	18845.87	43	10200.00
1999–2000	NA	NA	13000.00	NA	NA	24039.84	45	13000.00
2000–2001	NA	NA	15000.00	NA	NA	32506.88	41	15000.00
2001–2002	19500.00	88.57	19588.57	50772.00	88.57	50861.08	39	19588.00
2002–2003	26000.00	126.36	26126.36	68145.00	126.36	68271.36	38	26126.00
2003–2004	27000.00	136.00	27136.00	61242.10	136.00	61378.10	44	26136.00
2004–2005	47981.00	153.00	48134.00	115630.00	153.00	115773.00	43	47132.00
2005–2006	41000.00	2019.00	43019.00	101254.00	2019.00	103273.00	55	45018.00
2006–2007	46440.00	7372.41	53812.00	134231.97	7372.41	141604.38	38	53813.00
2007–2008	54000.00	3205.30	57205.30	170500.27	3205.30	173705.57	33	57205.00
2008–2009	50000.00	4517.80	54517.80	161821.23	4517.80	166339.03	33	54550.00
2009–2010	41000.00	497.14	41497.14	140961.90	497.14	141459.04	29	41997.00
2010–2011	42000.00	481.20	42481.20	139091.25	481.20	139572.45	30	42482.00
2011–2012	89742.25	639.60	90381.85	317031.86	639.60	317671.46	21	90382.00
2012–2013	13000.00	470.80	13470.80	419671.17	470.80	420141.97	31	130471.00
2013–2014	135901.00	1055.00	136956.00	477257.00	1055.00	478312.00	28.63	345487.90
2014–2015	147875.00	1326.00	149201.00	560222.00	1326.00	561548.00	26.56	372100.70

Source: RBI, Handbook of Statistics of Indian Economy.

The commercial banks, state governments and others continue to be the participants in the TBs markets. State governments and commercial banks are the dominant user of TBs than other individual participants and RBI has discontinued using the TBs since 2002 (Table 16.4).

Table 16.4 Ownership of 91-day auction T-bills (in ₹ crore)

Year	*RBI*	*Banks*	*State government*	*Others*
1993	1147	155	—	22
1994	605	3428	—	935
1995	68	38	618	77
1996	3211	408	2285	595
1997	1468	2365	1262	605
1998	627	29	530	95
1999	224	827	—	249
2000	288	557	—	455
2001	67	868	—	153
2002	154	2292	450	360
2003		6427	800	780
2004		3948	600	1452
2005		21176	1755	4829
2006		5943	9762	576
2007		12684	24250	6743
2008		6057	23825	10075
2009		49914	544	25092
2010		30875	—	40628
2011		23560	11590	34450
2012		48820	21590	48260
2013		34560	28200	42330

Source: RBI, Bulletins Various Issues.

16.11 TREASURY BILL RATES IN INDIA

LO 7

Summarise treasury bill rates and its limitations in India

Table 16.5 throws some light on the behaviour of all the three types of treasury bills during the study period. It is found that the average cut-off yield of the 91-day treasury bills has been varied between 4.59 percent in 2003–2004 to 12.97 percent in 1996–1997. In the recent years it has been around 8 percent. The trend in the cut-off yield has not followed any pattern and it has been highly volatile. The same type of pattern has also been observed for 182-day and 364-day treasury bills. All the three types of TBs more or less provide same amount of yield over the period.

Table 16.5 Implicit cut-off yield of treasury bills (in percent)

Year	*91-Day T-Bills*				*182-Day T-Bills*				*364-Day T-Bills*			
	Min.	*Max.*	*Average*	*End of period*	*Min.*	*Max.*	*Average*	*End of period*	*Min.*	*Max.*	*Average*	*End of period*
1992–93	8.99	10.97	10.03	10.97	NA	NA	NA	NA	10.96	11.42	11.23	11.09
1993–94	7.08	11.09	8.87	7.46	NA	NA	NA	NA	9.97	11.36	11.01	9.97
1994–95	7.21	11.99	9.16	11.99	NA	NA	NA	NA	9.41	11.94	10.15	11.94
1995–96	11.40	12.97	12.67	12.97	NA	NA	NA	NA	12.08	13.16	12.87	13.12
1996–1997	6.92	12.97	9.67	7.96	NA	NA	NA	NA	10.10	13.12	11.16	10.10
1997–1998	5.72	7.33	6.83	7.33	NA	NA	NA	NA	7.98	9.42	8.46	7.98
1998–1999	7.17	10.05	8.57	8.75	NA	NA	NA	NA	7.97	10.72	9.51	10.07
1999–2000	8.25	9.46	9.03	9.17	9.16	9.92	9.66	9.46	9.31	10.33	10.09	9.93
2000–2001	7.91	10.41	8.98	8.75	8.52	10.41	9.42	8.92	8.66	10.91	9.76	8.96
2001–2002	6.05	8.50	6.88	6.13	NA	NA	NA	NA	6.16	8.85	7.30	6.15
2002–2003	5.10	7.00	5.73	5.88	NA	NA	NA	NA	5.35	6.99	5.93	5.89
2003–2004	4.16	5.47	4.59	4.36	NA	NA	NA	NA	4.31	5.50	4.67	4.31
2004–2005	4.37	5.61	4.89	5.32	NA	NA	NA	NA	4.43	5.77	5.15	5.61
2005–2006	5.12	6.69	5.51	6.10	5.29	6.73	5.76	6.60	5.58	6.81	5.87	6.42
2006–2007	5.41	8.10	6.80	7.97	5.60	8.20	6.87	8.20	5.90	7.98	7.07	7.97
2007–2008	4.46	7.94	7.11	7.22	5.81	7.98	7.40	7.36	6.58	7.80	7.50	7.35
2008–2009	4.58	9.36	7.10	4.95	4.55	9.34	7.21	5.10	4.51	9.56	7.15	5.50
2009–2010	3.11	4.50	3.57	4.37	3.42	4.70	4.00	4.61	3.50	5.50	4.37	5.14
2010–2011	3.97	7.31	6.17	7.31	4.55	7.53	6.47	7.48	4.91	7.67	6.56	7.64
2011–2012	8.10	9.06	8.43	9.02	7.44	8.74	8.41	8.66	7.54	8.85	8.35	8.40
2012–2013	7.93	8.27	8.19	8.18	7.94	8.57	8.17	8.00	7.79	8.34	8.04	7.79
2013–2014	7.26	12.02	8.90	8.85	7.24	12.00	8.86	8.85	7.21	10.46	8.63	8.88
2014–2015	8.18	8.93	8.49	8.26	8.13	8.96	8.52	8.13	7.89	9.01	8.48	7.97
2015–2016	7.06	7.97	7.42	7.26	7.10	7.96	7.45	7.16	7.10	7.90	7.43	7.10

Source: RBI, Handbook of Statistics of Indian Economy.

16.12 TREASURY BILL RATES IN THE UNITED STATES AND UNITED KINGDOM

Table 16.6 Three months treasury bills rates in the United States and UK (annual averages of percentages).

Year	*The United States*	*UK*
2001	3.4	4.76
2002	1.61	3.86

(*Contd.*)

2003	1.01	3.56
2004	1.37	4.44
2005	3.15	4.55
2006	4.72	4.65
2007	4.36	5.53
2008	1.37	4.28
2009	0.15	0.48
2010	0.14	0.49
2011	0.05	0.48
2012	0.09	0.31
2013	0.06	0.29
2014	0.03	0.37

Source: Federal Reserve Bank and Bank of England Statistics

From Table 16.6, it is evident that the treasury bill rates have been lower in the case of both the United States and UK as compared to India. The 3-month treasury bills rate for the United States has decreased from 3.4 percent in 2001 to 0.03 percent in 2014. In the case of UK, it has decreased from 4.76 percent in 2001 to 0.29 percent in 2013 and then it has slightly increased to 0.37 percent during the year 2014. Overall for both the United States and UK the rate has been highly volatile and it has come down significantly after 2008. Further, the rate has not increased significantly. It could be due to the financial crisis that occurred in 2008, which has affected the liquidity of the markets in a larger way.

16.13 LIMITATION OF TB MARKET IN INDIA

Why is the treasury bills market in India limited, narrow and inactive? A part of the explanation can be given by comparing the institutional arrangements in India with those in England where this market is active. In the UK, banks deal in TBs because they can buy or sell them to discount houses for settling inter-banking indebtedness and for coping with the vagaries of government payments and receipts. The volume of transactions between banks and discount houses has been large because, for historical reasons, banks prefer to approach the latter for financial accommodation rather than the Bank of England.[4] Over a period of time, although the prejudice against approaching the Bank of England has declined, the previous arrangements have continued to stay. The facility to buy treasury bills from discount houses also mean the banks are in a position to buy them when the discount houses have held the bills for 4 or 5 weeks. In other words, it is possible for banks to obtain treasury bills when a part of the maturity of bills has elapsed and they have become relatively more liquid from the point of view of banks. The discount houses themselves operate in the treasury bills market because they have ample opportunities for business in TBs. This is so because, apart from clearing banks, British as well as foreign banks in London, and overseas clients, hold treasury bills for business purposes. Discount houses also hold TBs because they can offer them as security for obtaining call loans from banks. In India, the setting up of the Discount and Finance House of India (DFHI) in 1988 has created a facility similar to that created by discount houses in the UK. However, this facility is quite new, and

[4]Sayers, R S, *Modern Banking*, Oxford, 1967, p. iii

DFHI does not hold or deal in 91-day TBs. Although there were no discounting houses in India, banks had rediscounting facilities with the RBI in ample measure. In fact, since the RBI has been freely rediscounting these bills, the market for such bills has remained artificial and volatile. In view of the free rediscounting facilities, banks' investments in these bills have been extremely short-term and fluctuating.

Another important factor in this context is the extremely low rate of return on investment in TBs. As we shall see later, the treasury bill rate in India has been the lowest rate of interest in the entire interest rate structure. The difference between the treasury bill rate and deposit rates has been wide enough to dissuade investors, such as, companies from investing in treasury bills. Further, there has been almost no decrease in the differential between the treasury bill rate and the deposit rates. This situation in India is in complete contrast with that prevailing in the UK where since 1955, there has been a widening of the TBs market in the sense that 'outside' holders (i.e. those other than clearing banks) have become important. This has partly happened because of a greater increase in the rate of treasury bill compared to that of the time deposit. It is noteworthy that while in England the former is the higher of the two, in India it is the other way round and substantially so. The Chakravarty Committee also has stated that 'as the discount rate is too low, the general public is not interested in holding these bills, and only banks and financial institutions purchase them and hold them for short periods before rediscounting them with the RBI. If the return on TBs is raised to such a level as will induce banks, financial institutions and the public in general to purchase TBs as an attractive avenue for deploying their temporarily surplus funds, the amount of TBs which will be rediscounted with the Reserve Bank would not be as large as is the case at present. This would mean that Reserve Bank credit to government would be correspondingly lower.'[5]

A related factor which needs to be mentioned here is the relationship between the TBs market and the government securities market. As far as commercial banks are concerned, the RBI policy of requiring banks to invest in government securities for maintaining a SLR and stable conditions in the government securities market has reduced the importance of treasury bills as an investment medium. The readiness of the RBI to maintain stable prices of government securities has offered banks an opportunity to invest in government securities without risk, and at the same time earn a relatively higher rate of return. Since other financial institutions like LIC are also required to invest large amounts of their funds in government securities, they have to invest the remaining funds in assets which offer a higher rate of return.

SUMMARY

- A treasury bill is a particular kind of finance bill or a promissory note put out by the government of the country and it offers short-term investment opportunities, generally up to 1 year.
- The treasury bills are issued at discount and redeemed at par.
- The important qualities of treasury bills are (a) the high liquidity, (b) absence of risk of default, (c) ready availability on tap, (d) assured yield, (e) low-transactions cost, (f) eligibility for inclusion in statutory liquidity ratio (SLR), and (g) negligible capital depreciation.
- At present, the Government of India issues 91-day, 182-day and 364-day treasury bills through auctions.

[5]See RBI, Report of the Committee (Chakravarty Committee) to review the Working of the Monetary System, Bombay, 1985, pp. 153–54.

- The CMBs have the generic character of T-bills but are issued for maturities less than 91 days. Like T-bills, they are also issued at a discount and redeemed at face value at maturity. The tenure, notified amount and date of issue of the CMBs depends upon the temporary cash requirement of the government.
- Banks, primary dealers, state governments, provident funds, financial institutions, insurance companies, NBFCs, FIIs (as per prescribed norms), NRIs and OCBs can invest in T-Bills.
- T-bills are sold through auction and auction can be price-based or yield-based. A *yield-based auction* is generally conducted when a new government security is issued. A *price-based auction* is conducted when Government of India re-issues securities issued earlier.
- Depending upon the method of allocation to successful bidders, auction could be classified as *uniform price*-based and *multiple price*-based. In a uniform price auction, all the successful bidders are required to pay for the allotted quantity of securities at the same rate, that is, at the auction cut-off rate, irrespective of the rate quoted by them.
- In a multiple price auction, the successful bidders are required to pay for the allotted quantity of securities at the respective price/yield at which they have bid.
- Competitive bids are made by well-informed investors such as banks, financial institutions, primary dealers, mutual funds and insurance companies.
- Non-competitive bidding is open to individuals, HUFs, RRBs, co-operative banks, firms, companies, corporate bodies, institutions, provident funds and trusts. Under the scheme, eligible investors apply for a certain amount of securities in an auction without mentioning a specific price/yield. Such bidders are allotted securities at the weighted average price/yield of the auction.
- T-bills auctions are held on the *Negotiated Dealing System (NDS)* and the members electronically submit their bids on the system. Non-competitive bids are routed through the respective custodians or any bank or PD which is an NDS member.
- The outstanding amount of 91-day treasury bills has been increasing in comparison with 182 and 364-day treasury bills.
- The trend in the cut-off yield of treasury bills in India has not followed any pattern and it has been higher than the T-Bill rates in the United States and UK.

KEY TERMS

Treasury bill
Ordinary treasury bill
Adhoc treasury bill
Cash management bill
Ways and means advances
Yield-based auction
Price-based auction
Uniform price-based auction
Multiple price-based auction
Competitive bidding
Non-competitive bidding
Treasury bill yield

QUESTIONS

1. What is treasury bill? Explain the types, nature and characteristics of treasury bills market in India.
2. Explain the important qualities of treasury bills.
3. What is the significance of treasury bills in monetary policy operations?

4. Highlight the various auction process of the sale of treasury bills in India.
5. 'Treasury bill yield is volatile'. Justify this statement.
6. What are the major policy developments taken to develop the treasury bills market in India?
7. Calculate the yield of a 364-day treasury bill issued at a price of ₹97 after 90 days having the par value of ₹100.
8. What are the limitations of treasury bills market in India?
9. Write short notes on the following:
   (i) Cash management bill
   (ii) Non-competitive bidding
   (iii) Ways and means of advances
   (iv) Ad-hoc treasury bill
   (v) Negotiated Dealing System

Miscellaneous Short-Term Financial Markets

17 CHAPTER

Learning Objectives

- **LO 1** Know the working and development of commercial paper
- **LO 2** Explain certificate of deposits in India and abroad
- **LO 3** Understand in detail how commercial bills market work in India
- **LO 4** Illustrate the Discount and Finance House of India
- **LO 5** Describe the market for financial guarantees

17.1 INTRODUCTION

After discussing about the two important money markets in India, the objective of this chapter is to discuss about the working and development of other short-term financial markets, such as, commercial paper market, certificate of deposit market, commercial bills market, discount market and financial guarantees market. Two money market instruments, that is, commercial paper (CP) and certificate of deposits (CD), which are launched in 1989–1990 have also played a significant role in the development of the money market in India. Bill finance is one of the sources of financing for the companies apart from cash credits and overdrafts from commercial banks. In comparison with other methods of supplying credit, the method of bill finance is believed to impart flexibility to the money market, balance liquidity within the banking system, and make the policy of the central bank of the country more effective. Over the years, the Discount and Finance House of India (DFHI) was created to play an active role in developing the primary and secondary markets in the different money market instruments such as call money, term money, treasury bills, commercial paper, certificate of deposits, and government securities. Further, some financial institutions, such as Deposit Insurance and Credit Guarantee Corporation (DICGC) and Export Credit and Guarantee Corporation were set up to contribute to the stability of the financial system and protect depositors who are generally not in a position to make an informed assessment of the risk of failure of the bank where they have kept their deposit and to protect the Indian exporters against unforeseen losses, which may arise due to failure of the buyer, bank or problems faced by the country of the buyer by providing cost-effective credit insurance covers in the form of policy, factoring, and investment insurance services comparable to similar covers available to exporters in other countries, respectively. This chapter has been divided into four broad parts. The first section deals with the commercial papers and certificate of deposits markets; second part discusses about

commercial bills and role and development of discount market; and financial guarantees market have been provided in third and fourth parts.

17.2 COMMERCIAL PAPERS AND CERTIFICATE OF DEPOSITS MARKETS

LO 1 Know the working and development of commercial paper

The purpose of this section is to discuss the markets for two money market instruments, namely, Commercial Paper (CP) and Certificate of Deposit (CD), which are totally new on the Indian scene. They were launched in 1989–1990 and the markets for them are not yet fully developed. This section describes the nature of these instruments as they have evolved in some foreign countries, and then discusses the guidelines, prospects, problems, and implications in respect of the growth of markets for them in India.

17.2.1 What is a Commercial Paper?

What is called commercial paper is quite a new instrument in the money market. This is so even in the advanced industrial nations, except in the United States where it has been in vogue since the early nineteenth century. However, in all other countries it is only a post-1980 phenomenon.[1] CPs are short-term usance promissory notes with fixed maturity issued mostly by the leading, nationally reputed, credit-worthy and highly rated large corporations. The other, although less well-known, names of CPs are *Industrial Paper*, *Finance Paper* and *Corporate Paper*—the names depend upon whose liability the paper is. If it is a liability of the business or industrial or commercial or manufacturing concern, it is known as *Industrial* or *Commercial Paper*. If it is the liability of the financial company, it can be called a *Finance Paper*. *Corporate Paper* is a wider term, indicating that it is issued by corporations which may be either financial or non-financial. CPs are issued in domestic as well as international financial markets; in the case of the latter, they are known as *Euro-Commercial Papers*.

Characteristics of CPs

Strictly speaking, CPs are unsecured; they are backed only by the general credit standing of the issuing companies and by the lines of credit that they might be in a position to obtain from banks. They are negotiable by endorsement and delivery. They are regarded as highly safe and liquid instruments; they are believed to be one of the highest quality investment instruments available from the private sector. They are also known to be a simple and flexible instrument in respect of documentation needed and the spread of maturities available. CPs are like treasury bills (TBs), but unlike CBs because the latter are secured against self-liquidating goods or trade transactions. Finance Papers, such as TBs, particularly represent a floating debt. CPs are close competitors of TBs, but the latter have an edge over the former because they are less risky and more easily marketable. The CPs normally have a buy-back facility; the issuers or the dealers usually buy back CPs if needed.

[1]The years in which CPs came to be introduced in some foreign countries are as follows: UK= 1986; France = 1985; Japan = 1987; Canada = 1950s; Sweden = early 1980s; Spain = 1982; Norway = 1984; Netherlands = 1986; Hong-Kong = 1982; and Singapore = 1984.

CPs are normally issued in a bearer form on discount to face value basis. But the issues of CPs on a fixed interest basis are also known to the market. The issues of CPs are mostly in large denominations; and they may be made through banks or merchant banks or dealers or brokers in the open market, or they may be sold through direct placement with lenders or investors. In the United States, while the Finance Papers are usually sold directly, the CPs are generally issued through about 10 dealers who specialise in the marketing of CPs. As it was indicated earlier, the issues of CPs may be backed by a line of credit or a revolving underwriting facility from banks to ensure continuous availability of funds on each rollover of the paper or to ensure that payments are met when CPs mature. CPs are primarily issued by the public utilities, bank-holding companies, insurance companies, transportation companies, and finance companies. The buyers of the CPs are banks, liquid business concerns and non-bank financial institutions. The position of banks is quite important in the market for CPs because in addition to being important buyers, they act as agents in issuing CPs. They hold CPs for safekeeping, and also provide lines of credit to firms which issue CPs.

CPs have a very flexible maturity. In the United States, the maturity period cannot be more than 270 days; it varies between 3 and 270 days. The maturity is set by the buyers, which means that it can be tailored to the needs of the buyers. Three months or 90 days is the most common one in the United States. It varies between 7 and 364 days in the UK, 10 days to 7 years in France, 30 to 365 days in Canada and up to 185 days in Australia. The yield on CPs is determined in the market. Usually, it is slightly higher than the yield on TBs of the same maturity; it is slightly lower than the prime lending rate of banks and is higher than the comparable bank deposit rate. While CPs are a cheaper source of finance than bank loans, it is at the same time a more impersonal and, therefore, more unreliable source of finance. While the primary market for CPs is quite substantial, the secondary market is not active and well established in advanced countries also. This is said to be so because of the preponderance of short duration maturities and the investor's preference to hold CPs till maturity. CPs are mostly issued to finance current transactions and seasonal needs for funds. They are rarely issued to finance either the fixed assets or the permanent working capital of normal or expanding business activity. They may, of course, be issued as a means of interim financing that is, to fund the start-up of investment projects which may later be financed through long-term borrowings.

Why the Importance of CPs has increased abroad?

The importance of CPs has increased to strengthen *the process of securitization.* The rise and popularity of CPs in other countries has been a matter of spontaneous response by the large corporations to the limitations and difficulties they experienced in obtaining funds from the banks. The rising cost of bank loans and the extreme difficulty in obtaining bank loans in the tight money conditions led large companies to diversify their sources of funds by issuing CPs which they found to be a somewhat cheaper, simpler and more flexible source of funds. The raising of short-term debt through the issue of CPs apparently represents the strengthening of the process of "securitisation" and the weakening of the process of "intermediation". Through the issue of CPs, companies appear to be in a position to bypass the intermediation of banks at least to a certain extent. It serves as a means of "disintermediation" which brings the large borrowers and large investors (lenders) in direct contact with one another. However, in practice, the fact that banks are one of the major buyers of CPs shows that the latter do not really or actually result in disintermediation to a significant extent. Disintermediation, after all, has become difficult in the present day world of finance.

CPs in India

The introduction of CPs in India is a sequel to the work done and the framework suggested by the Working Group on Money Market in 1987. Subsequently, the RBI announced in March 1989 its decision to introduce a scheme under which certain borrowers could issue CPs in the Indian money market. This was followed by an RBI notification regarding guidelines to issue CPs which came into effect from 1 January 1990. Thus, this new instrument may be said to have come into existence in January 1990. It was launched "with a view to enabling highly rated corporate borrowers to diversify their sources of short-term borrowings and also providing an additional instrument to investors". These guidelines apply to all non-banking financial and non-financial companies which intend to raise funds through CPs. Companies governed by the Foreign Exchange Regulation Act, 1973 have been accorded general permission by the RBI to issue CPs. CPs are issued at a discount to their face value and the discount rate is freely determined by the company issuing the CPs, and the rate in the secondary market is freely determined in the market. CPs are freely transferable and negotiable. Banks are not permitted to either undertake or co-accept the issues of CPs. A company issuing CPs may seek the standby facility from its banker for an amount not exceeding the amount of the issue in order to meet the liability of the CPs on maturity. The issuing company is required to meet the stamp duty, the dealers' fees, the rating agency fees, the stand-by facility charges, the purchase and selling agency fee to the banker and other relevant expenses. The fund-based working capital limit of the issuing company from banks will be simultaneously reduced to the extent of the amount of CPs when they are actually issued.

Guidelines in Respect of the Issue of CPs

The guidelines/norms issued by the authorities in respect of the sale of CPs have undergone changes over the years. Those which are in force in 2013–2014 can be broadly described as follows:[2]

(i) Companies, PDs and FIs are permitted to raise short-term resources through CP.

(ii) A company would be eligible to issue CP provided (a) the tangible net worth of the company, as per the latest audited balance sheet, is not less than ₹4 crore, (b) the company has been sanctioned working capital limit by bank/s or FIs and (c) the borrowal account of the company is classified as a standard asset by the financing bank/institution.

(iii) CP shall be issued as a 'stand-alone' product. Further, it would not be obligatory in any manner on the part of the banks and FIs to provide stand-by facility to the issuers of CP.

(iv) Banks and FIs may, based on their commercial judgement, subject to the prudential norms as applicable to them, with the specific approval of their respective boards, choose to provide stand-by assistance/ credit, back-stop facility, and so on, by way of credit enhancement for a CP issue.

(v) Non-bank entities (including corporates) may provide unconditional and irrevocable guarantee for credit enhancement for CP issue provided: (a) the issuer fulfils the eligibility criteria prescribed for issuance of CP, (b) the guarantor has a credit rating at least one notch higher than the issuer given by an approved CRA, and (c) the offer document for CP properly discloses the net worth of the guarantor company, the names of the companies to which the guarantor has issued similar guarantees, the extent of the guarantees offered by the guarantor company and the conditions under which the guarantee will be invoked.

[2]RBI, *Master Circular—Guidelines for Issue of Commercial Paper*, 1 July, 2013.

(vi) The aggregate amount of CP that can be issued by an issuer shall at all times be within the limit as approved by its board of directors or the quantum indicated by the CRA for the specified rating, whichever is lower.

(vii) Banks and FIs shall have the flexibility to fix working capital limits, duly taking into account the resource pattern of company's financing, including CP.

(viii) An issue of CP by an FI shall be within the overall umbrella limit prescribed in the Master Circular on Resource Raising Norms for FIs, issued by the Reserve Bank of India, Department of Banking Operations and Development, as prescribed/updated from time-to-time.

(ix) The total amount of CP proposed to be issued should be raised within a period of 2 weeks from the date on which the issuer opens the issue for subscription. CP may be issued on a single date or in parts on different dates provided that in the latter case, each CP shall have the same maturity date.

(x) Every issue of CP, and every renewal of a CP, shall be treated as a fresh issue.

(xi) Eligible participants/issuers shall obtain credit rating for issuance of CP from any one of the SEBI-registered CRAs. The minimum credit rating shall be 'A3' as per rating symbol and definition prescribed by SEBI. The issuers shall ensure at the time of issuance of the CP that the rating so obtained is current and has not fallen due for review.

Investors in the CP Market

Any person, bank, company and other registered incorporated bodies as well as unincorporated bodies can invest in CPs. Non-Resident Indians also can invest in CPs but only on non-repatriable and non-transferable basis, and this must be indicated on CPs issued to them. FIIs shall be eligible to invest in CPs subject to (i) such conditions as may be set for them by Securities Exchange Board of India (SEBI), and (ii) compliance with the provisions of the Foreign Exchange Management Act, 1999, the Foreign Exchange (Deposit) Regulations, 2000 and the Foreign Exchange Management (transfer or issue of security by a person resident outside India) Regulations, 2000, as amended from time to time. CP shall be issued for maturities between a minimum of 7 days and a maximum of up to 1 year from the date of issue. The maturity date of the CP shall not go beyond the date up to which the credit rating of the issuer is valid. The CPs may be issued on a single date or in parts on different dates within a period of 2 weeks from the date of approval of the issue by the RBI.

Although the RBI guidelines leave the subscription to CPs open to all investors, the class of investors who buy them are corporate bodies operating in the intercorporate funds market, public sector corporations and various trusts with substantial funds suitable for short-term investment. In times of excess liquidity, banks also may patronise the CPs market. The issue of CPs to banks implies that a part of their loan portfolio is securitised. While a reasonable rate of return, as determined by market conditions, may induce these investors to buy CPs, the higher level of risk due to the fact that CPs are unsecured instruments may act as a disincentive. It is true that inter-corporate deposits also are unsecured. Therefore, it is felt by many that CPs serve as a good substitute for such deposits because they are negotiable by endorsement and delivery, and securitised while deposits are not. It is also argued that since CPs are within the maximum permissible bank finance limit which is fully secured, they are indirectly secured. But there are others who do not foresee such a possibility. According to this viewpoint, inter-corporate lenders and borrowers would prefer to trade in units

and tax-free bonds rather than in CPs because, while the former have a very simple trading method, the latter is laden with many administrative hassles. The non-bank institutional investors such as LIC, UTI and GIC are not substantial buyers of CPs primarily because their investment needs and investment pattern, as already discussed in earlier chapters, are determined by the government, and they are in the fields of either equities or other long-term investments or housing or public utilities. Individual and other small-sized investors are virtually shut out of the CPs market because of the restriction on the minimum size of investment in CPs, and because there is no tax incentive on investment in CPs. Actually, the major holders of CPs are banks. This implies that (a) the fears that the issue of CPs would result in banks losing big clients are belied, and (b) securitisation of banks' loan portfolio has actually begun to take place.

Impact of CPs on Commercial Banks

This brings us to the impact of the introduction of Commercial Paper in India on the business of commercial banks. Would this measure result in the loss of customers—depositors and borrowers—of banks? The foregoing discussion indicates that it is unlikely that banks will lose business on any significant scale. Let us look into this point more closely. The individual deposit-holders would continue to remain with the banks; the institutional and corporate demand deposits also would continue to be with the banks. The diversion of term deposits is likely to be marginal because investment in CPs is technically unsecured and therefore more risky than bank deposits which are risk-free. Similarly, the loss of quality advances by banks will not be substantial, since the entry of companies in the CP market is quite restricted and the quantum of CP issues is limited to only 20 percent of the fund-based working capital limit. We should remember that the possibility of the loss of business is determined by the flexibility and adequacy of the working capital available from banks. In India, as we have already explained, bank credit is predominantly provided in the form of cash credit. This is so flexible and has so many other favourable features that the new instrument is unlikely to surpass them. Therefore, there is little danger of banks losing their loan business significantly on account of the issue of CPs.

CP Market in India: Size and Interest Rates

Table 17.1 presents the information on year-end outstanding amounts and discount rates of CP market in India during 1993–1994 to 2015–2016. The size of the CP market is quite small in India, but its importance has been continuously increasing. There is an increasing trend in the outstanding year-end amount of CPs. It has increased from mere ₹95 crore in 1995–1996 to ₹260,244 crore in the year 2015–2016. It could be due to the relative importance of bond market in India and it also implies the requirement of enough short-term finances of companies to fulfill the working capital requirements. The interest rates on CPs have been comparable with the cost of bank borrowings. The weighted average of discount rate of CPs has been fluctuating over the years and it does not follow a particular pattern. It has been varied between 6.29 percent in the year 2010–11 and 12.2 percent in the next year. The issuance of CP has generally been observed to be inversely related to call money rates. Activity in the CP market reflects the state of market liquidity as its issuances tend to increase amidst ample liquidity conditions when companies can raise funds through CPs at an effective rate of discount lower than the lending rate of banks.

Table 17.1 Issue of Commercial Paper by scheduled commercial banks

Year	*Outstanding (rupees in crore) End-year*	*Rate of discount (%) End-year*	*WADR (%)*
1993–1994	3264	11.0–12.0	—
1994–1995	603	14.0–15.50	—
1995–1996	76	20.2	—
1996–1997	646	11.3–12.5	—
1997–1998	3413	8.3–12.0	—
2001–2002	7224	7.41–10.25	—
2002–2003	5749	6.0–7.75	—
2003–2004	9131	4.70–6.5	—
2004–2005	14235	5.2–7.25	—
2005–2006	12718	6.69–9.25	—
2006–2007	17898	10.25–13.00	8.59
2007–2008	32952	9.50–14.25	11.33
2008–2009	44171	6.40–12.50	10.38
2009–2010	75506	7.93–15.00	9.79
2010–2011	80305	9.75–15.25	6.29
2011–2012	91188	8.05–13.42	12.2
2012–2013	109255	8.64–12.61	11.9
2013–2014	106614	8.64–12.61	9.30
2014–2015	193268	7.44–14.92	8.80
2015–2016	260244	7.35–13.14	8.10

Source: RBI Annual reports, Monthly Bulletins, Various reports, Handbook of Statistics on Indian Economy (2010–2011, 2011–2012, and 2012–2013).

Note: (–) refers the absence of information.

Problems Hindering the Development of CP Market

The success of CPs and the development of market for CPs depend crucially on the emergence and growth of the secondary market for them. In India there is not a developed secondary market for CPs. Even in the United States, secondary market in CPs is not strong and well-developed, which shows that there are certain inherent limitations in the process of development of such a market. The eligibility conditions laid down in the RBI guidelines have no doubt limited the number of participants in the market. So far, some manufacturing and financial companies in the private and public sectors have issued CPs. The further actual development of the market for CPs would depend on the kind of policy adopted with respect to certain problem areas. One of the merits of CPs abroad, as already mentioned, is their simplicity of documentation and the procedure of issue. In India, however, the requirements of obtaining credit rating, and the necessity of doing so every time a company wants to issue CPs if the rating obtained earlier is more than 2-months old are likely to prove restrictive, time consuming and costly. Further, it is attractive to raise funds through CPs rather than through banks only if the cost is less. Another problem which hinders the growth of the CPs market is the stipulation that borrowers will lose a portion of their working capital limits with banks once they issue CPs. The idea is

that CP finance should be carved out of the working capital limits enjoyed by companies with their bankers, and that the bankers should reduce a company's working capital limits by an amount equal to that raised through CPs. In other words, at least for the time being, CP finance is not an additional finance, it is just a substitute for bank finance.

17.2.2 Certificate of Deposits

Certificate of Deposits Abroad[3]

LO 2

Explain certificate of deposits in India and abroad

CDs are (represent) bank deposit accounts which are transferable from one party to another. They are marketable or negotiable short-term instruments in bearer form and are known as Negotiable Certificates of Deposit (NCDs) also. They are marketable receipts in bearer or registered form of funds deposited in a bank for a specified period at a specified rate of interest, that is, they are documents of title to time deposits with banks. CDs are interest-bearing, maturity-dated obligations of banks and technically they are a part of banks' time deposits. They are negotiable because they are payable either to the bearer or to the order of the depositor. They can be sold to someone else, and are traded on the secondary markets. Liquidity and marketability are said to be the hallmarks of CDs. CDs are also virtually riskless in terms of default of payment of interest and principal.

CDs are the obligations of banks just as Finance Papers are the obligations of finance companies. CDs are usually issued at face value, on which fixed rates of interest are paid, and they are traded on a bond equivalent yield basis, but the issues of CDs on a discount to face value basis are also known to the market. If they are issued on discount basis, they are similar to treasury bills or commercial bills, but if they are not so issued, they differ from these other money market instruments. CDs are also like bonds. Unlike TBs, CDs lack homogeneity in respect of the issuer, maturity, interest rate and other features; therefore, trading in CDs normally can never become as important as trading in TBs.

Banks issue or sell CDs either directly to the investors or through the dealers. They may be issued on the initiative of secondary market dealers who may persuade banks to issue particular CDs either to hold in their own portfolios or often to meet the requirements of customers who approach them rather than the banks. In the United States, CDs are issued almost in any denomination—from $100,000 to $10 million, but the usual denomination is $100,000. The large minimum size of issue is one of the characteristics of CDs which is similar to that of CPs. Apart from compliance of the overall assets capital gearing, there is no other ceiling prescribed for banks to issue CDs. Banks usually do not buy back their own CDs. In the UK, CDs are not eligible collateral for loans from the Bank of England. They are subject to reserve requirements which depend on the length of maturity of CDs.

The maturity period of CDs varies between 2 weeks and 5 years; the more common period is 3 months to 1 year; and the most common period is 3 months or 90 days. CDs are quite flexible in respect of maturity period; banks are willing to sell NCDs to their corporate customers in specific maturities which are tailored to corporate cash needs such as dividend payments and tax payments.

Because of their marketability and greater liquidity, banks can issue CDs at a rate which is lower than the rates for deposits of the same or similar maturity. In the United States, in the initial period, the rate of interest on

[3]For a comprehensive discussion of markets for CDs abroad, refer to Shetty, S L, ''The Evolution, Characteristics and Growth of Certificates of Deposit (CDs) in Selected Foreign Countries'', Reserve Bank of India Occasional Papers, June 1989.

CDs used to be subject to a ceiling under Federal Reserve Regulation Q, but this restriction has been removed since 1973. The yield on CDs is determined by market forces and banks' own credit ratings; the yield is higher on CDs of higher denomination and of longer maturities. The yield can be fixed through negotiation in the primary market; in the secondary markets, the yields are not controlled and may at times rise above the rate in the primary market. The yield on CDs is higher than that on TBs. With all these advantages, CDs have a major disadvantage: the possibility of a loss to the holder if interest rates are expected to increase. At such times, it becomes difficult to issue or market CDs and dealers are left with large stocks of them. As a solution, variable rate CDs have sometimes been issued. Banks in the United States introduced such variable rate CDs in the late 1970s. These CDs are mostly with a maturity of 6 months and a 30-day roll or with 1 year and a 3-month roll, where on each roll date banks pay the accrued interest and set a new coupon.

As said earlier, CDs are issued by banks, particularly by large banks for attracting large corporate deposits. In any case, the major holders of CDs are cash-rich business firms of varying sizes and money funds, that is, mutual funds investing exclusively in money market instruments. In addition, state and local governments, foreign governments and central banks, non-bank financial institutions and sometimes individuals also buy CDs. However, any significant mobilisation of individual savings through the medium of CDs is unknown and unthinkable. Banks themselves may buy and sell CDs in the secondary market but they are reluctant to actively invest in them. What is of crucial importance in issuing CDs by banks is the existence of an efficient secondary market for them. In UK, discount houses are the main dealers in the secondary market. As with CPs, the development of secondary market in CDs in both the United States and UK has been quite slow; the trading volume in CDs has been much smaller than that of TBs; it has been found that many firms tend to hold CDs until maturity; and the development of secondary market has been hampered by rising rates of interest.

CDs have been introduced by many developed and developing countries. As far as the developed countries are concerned, the introduction of CDs has usually preceded the introduction of CPs. They were introduced in 1961 in the United States; in the UK, while dollar CDs were introduced in 1966, pound CDs were introduced in 1968.[4] What could be the reasons behind the emergence of CDs? Many forces and factors must have contributed to the evolution of CD markets in different countries. Some of the motives behind the introduction of CDs in different countries[5] appear to have been to restore intermediation function of banks, to innovate financially, to mop up excess liquidity in the monetary system and to introduce financial reforms. The CDs issued in international markets are known as euro-certificates of deposits.

Motives for Introduction of CDs Abroad

The major motive for introducing CDs by banks appears to have been to meet competition and maintain the share of financial markets by means of this instrument which has some advantages over the time deposit, which is the other major means of mobilising resources by banks. This is a wider concept than the idea of counteracting disintermediation or securitisation process. Banks were facing competition in their deposit mobilisation efforts from other financial institutions which were themselves intermediaries. The impetus to securitisation in the form of marketing instruments such as CPs occurred much later than the introduction of CDs in many countries. In short, banks introduced CDs as a competitive tool against other financial intermediaries as well as the process of securitisation and not merely against the latter.

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[4]The years of introduction of CDs in few other countries were as follows: Japan = 1979; France = 1985; W. Germany = 1986; Australia = 1969; New Zealand = 1971; South Korea = 1974; Malaysia = 1979 and Indonesia = 1971.

[5]Shetty, S L, *op. cit*., p. 74.

In the UK, the major attraction of CDs to the issuing banks was that depositors could be persuaded to enter into a longer term deposit if it was covered by a negotiable certificate. Term deposits often have severe penalty clauses written into them in case the depositors want to withdraw their money before the maturity date. Now that CDs can be sold on the secondary market, depositors could be persuaded to put their savings with the banks and that too for longer periods of time.[6]

In the United States, around the beginning of the 1960s, commercial banks were becoming acutely aware of the fact that the supply of funds from their depositing customers was not keeping up with the demand for funds. Large banks were particularly disturbed about losses of demand deposits from corporate accounts. Corporate treasurers had become increasingly sophisticated and were moving excess funds out of non-earning demand deposits and putting them into TBs, CPs and such other instruments. It was found that the growth rate of aggregate bank' deposits was lagging far behind the rate of growth of aggregate savings accounts at non-bank thrift institutions. The banks responded to these developments by introducing Negotiable Certificates of Deposit (NCDs) in 1961 and were able to restore their supply of short-term funds from the corporations.[7]

CDs are regarded by some people as reflecting changes in the practices of liquidity management by banks. Usually, banks made provision for liquidity almost entirely on the assets side of their balance sheet. The commercial loan theory, shiftability, anticipated income-all relied on asset management to supply liquidity when needed. Starting in the early 1960s, however, banks began increasingly to draw their liquidity from the liabilities side of their balance sheet. Instead of taking their liability structure as given and tailoring their assets to fit it, they began to take the target asset growth as given and adjusted their liabilities to suit their needs. This was facilitated by the growth of NCDs. The CDs enabled banks to raise necessary funds to meet the loan-demand of credit-worthy borrowers, to make long-term loans instead of giving short-term ones for the sake of liquidity, and to avoid storing up liquidity in short-term, low-yielding assets because it could always be bought (through CDs) on the market when needed.[8]

Certificate of Deposits in India

Since the beginning of the 1980s, the possibility of introducing CDs in India was being seriously assessed. The Tambe Working Group studied, in 1982, its feasibility and recommended against it for the following reasons: (a) there were no secondary money markets; (b) there was the administered system of interest rates, and (c) there was the possibility that CDs might give rise to fictitious transactions. The Vaghul Working Group studied the matter again 5 years later (1987) and was in favour of introducing CDs, provided short-term deposit rates were aligned with other interest rates in the system. Ultimately, following the rationalisation of interest rates on short-term deposits, the RBI formulated and launched, in June 1989, a scheme permitting banks to issue CDs 'with a view to further widen the range of money market instruments and to give investors greater flexibility in the deployment of their short-term surplus funds.' Certificate of Deposit (CD) is a negotiable money market instrument and issued in dematerialised form or as a Usance Promissory Note against funds deposited at a bank or other eligible financial institution for a specified time period.

The RBI has modified its original scheme from time to time. The norms/guidelines which are in force in 2012–2013 are broadly as follows:[9]

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[6]Revell, Jack, *The British Financial System*, Macmillan, London, 1973, p. 277.
[7]Robinson, R I, and Wrightsman, D., *Financial Markets*, McGraw-Hill International Book Co., New York, 1980, p.225.
[8]Ritter, L S and Silber, W L, *Principles of Money, Banking, and Financial Markets*, Basic Books, New York, 1977, pp. 106–07.
[9]RBI, Master Circular-Guidelines for Issue of Certificates of Deposit, 2 July, 2012.

(1) CDs can be issued by (i) scheduled commercial banks (excluding regional rural banks and local area banks), and (ii) select All-India Financial Institutions (FIs) that have been permitted by RBI to raise short-term resources within the umbrella limit fixed by RBI. (2) Banks have the freedom to issue CDs depending on their funding requirements. (3) Minimum amount of a CD should be ₹1 lakh, that is, the minimum deposit that could be accepted from a single subscriber should not be less than ₹1 lakh and in multiples of ₹1 lakh thereafter. (4) CDs can be issued to individuals, corporations, companies (including banks and PDs), trusts, funds, associations and so on. Non-resident Indians (NRIs) may also subscribe to CDs, but only on non-repatriable basis, which should be clearly stated on the certificate. Such CDs cannot be endorsed to another NRI in the secondary market. (5) The maturity period of CDs issued by banks should not be less than 7 days and not more than 1 year, from the date of issue. The FIs can issue CDs for a period not less than 1 year and not exceeding 3 years from the date of issue. (6) CDs may be issued at a discount on face value. Banks/FIs are also allowed to issue CDs on floating rate basis provided the methodology of compiling the floating rate is objective, transparent and market-based. The issuing bank/FI is free to determine the discount/coupon rate. The interest rate on floating rate CDs would have to be reset periodically in accordance with a pre-determined formula that indicates the spread over a transparent benchmark. The investor should be clearly informed of the same. (7) CDs in physical form are freely transferable by endorsement and delivery. CDs in demat form can be transferred as per the procedure applicable to other demat securities. There is no lock-in period for the CDs.

Steps taken by RBI to Develop the CP and CD Market

(i) The minimum tenor has been brought down to 7 days (by October 2004) in stages and the minimum size of individual issue as well as individual investment has also been reduced to ₹5 lakh with a view to aligning it with other money market instruments.

(ii) It was converted into a "stand-alone" product from October 2000 so as to enable the issuers of the services sector to meet short-term working capital requirements.

(iii) Banks were allowed to fix working capital limits after taking into account the resource pattern of the companies' finances, including CPs. Corporates, PDs and all-India financial institutions (FIs) under specified stipulations have been permitted to raise short-term resources by the Reserve Bank through the issue of CPs.

(iv) There is no lock-in period for CPs. Furthermore, guidelines were issued permitting investments in CPs only in dematerialised form effective 30 June, 2001 which has enabled a reduction in the transaction cost.

(v) In order to rationalise and standardise, wherever possible, various aspects of processing, settlement and documentation of CP issuance, several measures were undertaken with a view to achieving the settlement on a T+1 basis. For further deepening the market, the Reserve Bank issued draft guidelines on securitisation of standard assets on 4 April, 2005. Accordingly, the reporting of CP issuance by issuing and paying agents (IPAs) on NDS platform commenced effective 16 April, 2005.

(vi) The fuller capital account convertibility (FCAC) committee observed that CPs being short-term instruments, any unlimited opening up of issuance could have implications for short-term debt flows. It, therefore, recommended for prudential limits even under full convertibility.

(vii) The Status Paper proposed that minimum credit rating may be brought down to P3 of CRISIL or its equivalent to provide wider choices to both issuers and investors. Incidentally, P3 is the lowest level among the investment grades. In this context, it may be noted that the CP market is generally accessible only to companies with high credit quality as only such companies can find buyers for their commercial paper. This is evidenced from the fact that prime rated companies (that is, P1+ or equivalent) constituted about 87 percent of the total amount of CP issued during 2004–2005 so far as indicated above. Therefore, investors in the market appear to require commercial paper to have virtually no default risk. It may, however, be noted that it has been continued to maintain P2 or its equivalent as the minimum credit rating required for issue of CP.

(viii) The Status Report recommended introduction of asset-backed commercial paper (ABCP) for further deepening the CP market. Asset-backed commercial paper is fundamentally different from traditional commercial paper. It is essentially a pass through security typically with accounts receivable and other current assets as the backing asset that is being passed through just as an asset-backed mortgage security with mortgages payments being passed through. In a way, asset-backed issuers securitise a portfolio of cash-generating assets funded by liabilities including CP. This process may enable smaller firms even with higher risks to access the CP market. Traditionally, banks use ABCP as a liquidity management instrument.

(ix) At present, issuers decide on the discount rates of their CPs taking into account the Reuters/Telerate CP reference rate as well as the supply-demand forces prevailing in the market. In this context, in order to improve transparency and strengthen efficiency, the Status Paper proposed to make reporting all CP deals mandatory, in line with the same for call/notice money deals, on the NDS platform so that benchmarking becomes more appropriate in the economy.

(x) The minimum maturity period of CDs issued by banks has been reduced to 7 days (April 2005) with a view to aligning the minimum tenor for CPs and CDs as recommended by the Narasimham Committee (1998).

(xii) Select all-India financial institutions are permitted to issue CDs for a maturity period of 1–3 years.

(xiii) The minimum issuance size has been reduced from ₹1 crore in 1989 to ₹1 lakh in June 2002. Banks and FIs are required to issue CDs only in dematerialised form, effective 30 June, 2002, in order to impart more transparency and encourage secondary market. Banks are permitted in October 2002 to issue floating rate CDs as a coupon bearing instrument so as to promote flexible pricing in this instrument. The FCAC Committee recommended for prudential limits on opening up CDs even under full convertibility.

Growth Potential of CDs Market in India

There is a potential for the growth of primary and secondary markets for CDs. It is believed, that money market instruments such as CDs, can get support from various sources. For example, many large public sector undertakings and private sector corporate bodies are believed to have acquired substantial floating cash flows in our inflationary environment. Similarly, partly because of these corporate funds and partly because of significantly high household savings, financial institutions such as UTI have gathered huge investible funds which do not have ready investment outlets. Then there are inter-corporate funds of substantial amount ready to be invested in a suitable lucrative medium. Thus, there is a potential for the success of CDs from the demand side. On the supply side, domestic banks are facing stiff competition from foreign banks and

from other financial institutions which is telling on the share of bank deposits in the total household savings. Therefore, banks are in need of exploring the use of innovative means such as CDs to maintain their share in the funds market. Given such favourable supply and demand factors, and given the support of the RBI and institutions such as the DFHI, the markets for CDs seem to have a good potential for growth in the coming years.[9] The interest rates offered on CDs are rather high, taking into account the fact that CDs are subject to reserve requirements. The maturity of 3 months at the short end and 1 year at the (relatively) long end are generally popular with the investors. As a result of the introduction of CDs, it is being found that the current accounts of banks are getting somewhat depleted as funds are being diverted from these accounts to CDs. The companies are putting pressure on banks and their subsidiaries to give them higher interest rates. A part of the CD market is in the form of substitution and not fresh accrual of deposits. This means the banks are "retaining" their deposits at a higher cost which may adversely affect their profitability.

CD Market in India: Size and Interest Rates

Table 17.2 Issues of certificate of deposit by scheduled commercial banks

Year	*Outstanding (rupees in crore) End-year*	*Rate of discount (%) End-year*	*WADR*
1993–1994	5142	7.0–12.0	—
1994–1995	8017	10.0–15.0	—
1995–1996	16316	12.0–22.25	—
1996–1997	12134	7.0–14.25	—
1997–1998	8491	7.0–14.0	—
2001–2002	1576	5.0–10.03	—
2002–2003	908	5.7–10.0	—
2003–2004	4461	3.87–5.16	—
2004–2005	12078	4.2–6.34	—
2005–2006	43568	6.5–8.94	—
2006–2007	93272	10.23–11.90	8.62
2007–2008	147792	9.00–10.75	10.75
2008–2009	210954	6.00–11.50	6.48
2009–2010	341054	4.52–7.12	6.07
2010–2011	424740	9.00–10.60	9.96
2011–2012	419530	9.30–11.90	11.1
2012–2013	389612	8.80–10.12	11.2
2013–2014	375796	8.94–10.35	9.20
2014–2015	280968	8.38–9.10	8.70
2015–2016	210593	7.18–8.55	7.80

Source: RBI Annual reports, Monthly Bulletins, Various reports, Handbook of Statistics on Indian Economy (2010–11, 2011–12, and 2012–13).
Note: (—) refers to absence of information.

The year-end outstanding CDs were only about 2.40 percent of the outstanding deposits of scheduled commercial banks in 1996–1997. In 2002–2003, this percentage was negligible. During 2003–2004 to 2011–2012 it has increased, but again it declined during the period 2012–2013 to 2015–2016. In the early years the interest rates on CDs have been much higher than those on bank deposits. The large institutional and corporate depositors have been in a position to receive a better rate of return than the small depositors from the banks. Put differently, if interest rates on bank deposits are not regulated by the RBI, banks would be willing to offer higher interest rates on their deposits than those which have prevailed for many years. But in the recent years it has declined and at par with the bank deposit rates. The weighted average of CD rates has shown a fluctuating trend and it has been around 7.8 percent in the year 2015–2016 (Table 17.2). The large recourse to CDs could be attributed to banks' demand for funds in the wake of acceleration in demand for bank credit.

Problems Hindering CD Market in India

As in the case of CPs, the existence of an active secondary market is crucial for the success of CDs also. Not unexpectedly, there is as yet no such market in India. This appears to be due to the fact that CDs are priced high and holders in primary market prefer to hold them to maturity. However, the presence of the DFHI in the money market should help the development of such a market in course of time. The DFHI has already started quoting daily bid discount rate on CDs and it will quote offer rates as soon as it has built up enough stock of CDs. There are certain inhibiting factors that stand in the way of the DFHIs developing the secondary market in CDs. Among such are the tendency on the part of investors to hold CDs till maturity and the lack of information to the investors, particularly those outside Mumbai, regarding the facilities available with the DFHI. Although the scheme of CDs has been in operation for quite some time, it has yet to gain ground and its usage has remained confined to only a few corporations and banks. Most of the CDs issued are said to have been replacements of the existing current account or short-term deposits.

17.3 COMMERCIAL BILLS MARKET

17.3.1 Bill of Exchange

LO 3
Understand in detail how commercial bills market work in India

The financial instrument which is traded in the bill market is a bill of exchange. It is used for financing a transaction in goods that takes some time to complete. It shows the liability to make the payment on a fixed date when goods are bought on credit. According to the Indian Negotiable Instruments Act, 1881, it is a written instrument containing an unconditional order, signed by the maker, directing a certain person to pay a certain sum of money only to, or to the order of, a certain person, or to the bearer of the instrument. Being a negotiable instrument, it can change ownership conveniently during its currency, and it possesses clearly understood legal safeguards. The operators on the money market regard it as a "self-liquidating" paper, its degree of liquidity being next only to cash, call loan and treasury bill, in that order. To put it a little differently, it is an asset which is 'shiftable', and which carries a low degree of risk of loss. It is in respect of 'shiftability' that it greatly differs from other commercial loans by banks. Bills of exchange are known as Bankers' Acceptances in the United States. What is known as commercial paper

in the United States is not exactly a bill of exchange, although some people may regard it as similar to the inland bill of exchange.[10]

17.3.2 How does a bill of exchange come into existence?

Suppose seller A sells goods to buyer B. In most cases A would want to have money immediately but B would like to make payment only after some time, say, when he resells the goods he has purchased. To solve the difficulty, A draws a bill of given maturity on B; A, the creditor, is known as the drawer of the bill, and B, the debtor, is known as the drawee of the bill. A then sends the bill to B who acknowledges his responsibility for the payment of the amount on terms mentioned on the bill by writing on the bill his 'acceptance'. When B has 'accepted' the bill, he has closed the transaction for the time being. A can now take the 'accepted bill' to a bank and hand it over in exchange for ready money. This act of handing over of the endorsed bill in exchange for ready money is called 'discounting the bill of exchange'. The margin between the ready money paid and the face value of the bill is called the 'discount', which is calculated at a rate percent per annum on the maturity value. The act of discounting is not to be interpreted as borrowing on the security of the bill; it is an act of selling the bill.[11] In India, however, in almost all cases of even 'bills purchased' by banks, they hold the bills only as a security for the advances.[12]

17.3.3 Historical Perspective of Bill Financing

The origin of the trade bill dates back to the fourth century BC when the Greeks were known to have made use of the bills for settlement of commercial transactions. Historical evidence suggests that in Italy, too, sometime at the end of the twelfth century AD, a form of written promise akin to a promissory note in the context of foreign trade replaced coin exchange and that the practice of granting credit to the holder of the note was also in existence. During the middle ages in Europe, bills were also known to have been drawn to fall due at the time and place where fairs were held. However, much before the advent of bill, the principal instrument of collecting commercial debt was the 'bond' executed by the debtor before a court or public notary to impart legality. Since the process of executing bond was time consuming and expensive, merchants of the era developed a less expensive but more private and informal document acknowledging debt and thus, the concept of 'commercial bill' was born. However, unlike the bond, the bill when it was conceived, was not a legal document, though lack of legal formalities made it more readily transferable in practice than the bonds which required the formalities of registration with a court and the consent of the debtor for assignment. The characteristic of easy transferability of the bill was the key feature of the instrument, which really paved the way for its development as a full-fledged commercial and financial instrument. It enabled the bill to be assigned to a bank for the drawer to obtain cash immediately and thus, evolved the practice of discounting of bills. A further landmark in the evolution of bill was its being accorded the characteristic of negotiability sometime during the sixteenth century, whereby all the endorsers of a bill became liable on the debt represented by the instrument in order of their endorsement—a form of guarantee, which made it

[10]See the next part of this chapter on Commercial Paper.
[11]Sayers, R S, *Modern Banking*, Oxford, 1967, p. 47.
[12]Bedi, M L, and Hardikar, V K, *Practical Banking*, Bombay, 1971.

easier for the bills to be sold. The bill thus, became a freely exchangeable instrument evidencing commercial transaction and came to be known as the bill of exchange and was accorded full legal sanctity in England in the eighteenth century through legislation. With the growth in international trade, bill of exchange became the principal instrument of settlement in international trade.[13]

In India, indigenous bankers and other business houses have been historically using some kind of bill-like instruments written in vernacular languages, known as '*Hundies*' in their many variants to pay and receive the value of agricultural goods exchanged in the course of trade. There are two kinds of *hundies*: *darshani* (sight or demand) and *muddati* (usance). *Darshani hundi* is of diverse varieties such as (a) *shah jog*, (b) *nam jog*, (c) *dekhamar jog*, (d) *fermani jog*, (e) *jokhami*, and (f) *dhani jog*.[2] It is *darshani hundi* that comes closer to the bill of exchange of the modem type in terms of the purposes for which it is used. It is used for the payment of goods originating from upcountry places and passing from party to party in different places; its destination of payment may be quite different from its place of origin. The use of *muddati hundi*, on the other hand, is confined to local limits and its use is diminishing. The maturity of *muddati hundi* varies between 30 and 120 days, the latter being more common. Even in the case of *darshani hundi*, because of specific customs, usages and communities using them, their negotiability under the Negotiable Instruments Act is very restricted. Therefore, only where no specific custom exists does it come under the term "bill of exchange" within the meaning of the Act. It may be added that the active use of a credit instrument may not solely depend on its legal status, and the force of usage and faith may prove quite adequate for making the particular instrument widely accepted in the country. There has been a tendency in the recent past to bring the usages of *darshani hundi* more and more in line with the modem style of banking which would result in its gaining wider currency.

Among different communities of indigenous bankers, it is mostly the Multani Shroffs and the Chettiars who have been mainly dealing in *hundis*. Banks usually discount their *hundis*. Although the State Bank of India has, since 1965, stopped giving discounting facilities, other commercial banks continue to extend such facilities to the multani bankers. It has been observed that banks regard *multani hundi* as a convenient form of investment for their idle and surplus funds. Banks discount *hundis* on the basis of the personal standing of the indigenous bankers. The existing arrangements should be taken advantage of, for developing the bill market in the country. Experience has shown that commercial banks' efforts, after their nationalisation, to meet the credit requirements of small-scale and cottage industries, and of other small borrowers have often resulted in increasing bad debts, delays in recoveries, increasing administrative expenses and lowering of profitability. These problems can be tackled to a considerable extent if banks meet the financial requirements of the various categories of borrowers through indigenous bankers. For that purpose, they should adopt a policy of discounting *hundis* not as an irregular phenomenon when they have surplus liquidity, but as a regular business. The SBI should restart the facilities it had earlier extended in this context and profit from the experience accumulated since the days of the Imperial Bank. Although efforts should be made to improve the assessment procedure of the credit standing of indigenous bankers, the geographical spread of commercial banks should enable them to extend discounting facilities on the basis of personal credit standing of indigenous bankers without involving a large risk of default.

[13]RBI, Report of the Working Group on Discounting of Bills by Banks (Chairman: K R Ramamoorthy) September 2000.

17.3.4 Classification of Bills

There are various types of bills of exchange in the market. They can be classified on the basis of (a) when they are due for payment, (b) whether documents to title of goods accompany them or not, (c) the type of activity they finance, and so on. For example, some are demand bills whereas others are usance bills. A *demand bill* is payable immediately 'at sight' or 'on presentment' to the drawee. A bill in which no time for payment is specified is also considered to be a demand bill**.** *Usance* or *time bill*, on the other hand, is payable at a specified later date. The term usance refers to the time period recognised by custom or usage for the payment of bills. Similarly, bills can be classified as '*clean bills*' and '*documentary bills*'. In the case of documentary bills, the drafts are accompanied by documents of title to goods, such as railway receipts or bills of lading. In this context, bills are also classified as D/A and D/P bills. When the documents accompanying the bill of exchange is deliverable against acceptance by the drawee (D/A or documents against acceptance), it becomes a clean bill after delivery of the documents. In case the bill of exchange is a D/P (documents against payments) bill and is accepted by the drawee, the documents of title are held by the banker till the bill of exchange is mature.

Then there are inland bills and foreign bills. *Inland bills* must (a) be drawn or made in India, and must be payable in India, or (b) be drawn upon any person resident in India. An inland bill may even be endorsed in a foreign country and remain in circulation there. Similarly, a bill drawn on a resident in India is an inland bill irrespective of the place where it is drawn. *Foreign bills*, on the other hand, are (a) drawn outside India and may be payable in and by a party outside India, or may be payable in India or drawn on a party resident in India, or (b) drawn in India and made payable outside India. A related classification of bills is export bills and import bills. While export bills are those drawn by exporters on any country outside India, import bills are those drawn on importers in India by exporters outside India.

17.3.5 Accommodation and Supply Bills

Apart from the genuine bills of exchange, that is, bills which evidence sale and/or dispatch of goods, there are other bills which are known to the money market. They are accommodation bills and supply bills. An 'accommodation bill' is defined as one in which a person, called an accommodation party, puts his name (accepts it) to accommodate another person without receiving any consideration. Such a bill is sometimes called, a kite or wind bill. Some people tend to regard usance promissory notes, specifically created by borrowers by converting their borrowings, cash credit and overdrafts into usance promissory notes, also as accommodation bills. The supply bill is a bill drawn by the supplier or the contractor on the government or semi-government department, on account of supplies of goods or other materials made under contract to the department concerned. It is possible for the supplier to obtain advance from a commercial bank against such bills. The need for drawing such a bill arises because payments are not usually forthcoming promptly from the government due to procedural delays and the supplier needs funds in the meantime. Such bills are not accompanied by documents of title to goods, they are not 'accepted' by government departments, and they do not have the status of a negotiable instrument. As such, bank advances against supply bills are clean advances. Sometimes, banks treat supply bills drawn on first class companies on par with those drawn on government departments and grant advances against them. The process of bill finance just described is rather simple. In practice, however, it is quite complex and varies a great deal. First, a bill may pass through many hands before its maturity which means one discounting agency may discount it further with another financing agency. It is also possible for the eligible financial institutions to discount eligible bills with the Central Bank

of the country. Second, the service of 'acceptance' may be provided by a bank or a specialised institution on behalf of the debtor. Further, it is possible that instead of the buyer of goods approaching the 'accepting' agency, his bank may do so on his behalf.

17.3.6 Acceptance

As the service of "acceptance" is very crucial for increasing the liquidity of a bill of exchange, let us discuss this point a little more. "Acceptance" service is a guarantee service provided for commission in the case of commercial trade bills. It does not involve either borrowing or lending. Essentially, it is the sale of the use of a name as an effective guarantor that there will be no default on the bill of exchange. The set-up for rendering this service differs from country to country. In UK, there exist specialist firms called 'accepting houses'. Apart from these houses, banks also have started giving this service since the beginning of this century. In the United States, this function is mostly performed by banks. The accepting agencies keep information about the credit standing of various traders at home and abroad. The acceptance service originated and grew mainly for financing international commercial transactions because it is in the case of such transactions that the credit standing of the buyer is unlikely to be known to the seller. Exporters particularly need the acceptance service.

In India, there are neither specialised acceptance agencies for providing this service on a commission basis nor is it provided to any significant extent by commercial banks. The acceptance business of all commercial banks is small. In the interests of future development of the bill market, commercial banks and indigenous bankers should take the responsibility for providing this service. Commercial banks appear to have the knowledge and experience on the basis of which they can enter into the acceptance business. Under the Bill Market Schemes introduced by the RBI in 1952, banks are required to select the borrowers after careful examination of their means, respectability and dealings for conversion of their advances into bills. Banks maintain opinion registers on different drawers of bills and they get reports from time to time on these drawers of bills. Banks have thus collected credit intelligence on many borrowers and they are already equipped to some extent to enter into the acceptance business not as a stop-gap arrangement but as a permanent diversification of their business. In addition, due to their long experience of dealing in *hundis*, indigenous bankers are also equipped to do this business. It was therefore, suggested that, instead of setting up altogether new agencies in line with acceptance houses and discount houses in the UK, and instead of contemplating a temporary entry into this business by banks, appropriate measures should be taken to encourage banks and indigenous bankers to undertake acceptance business as a permanent part of their activities.

17.3.7 Maturity of a Bill

The maturity of a bill of exchange can be defined as the date on which its payment falls due. There is no single fixed maturity period for bills in general. As said earlier, the normal maturity period of usance hundi is 30 or 60 or 90 or 120 days, but *hundis* maturing within 90 days appear to be the most popular. Indian exporters usually draw bills of 3 months' usance and rarely longer. Similarly, the bulk of India's import trade from Western countries is financed by 60 days' bills drawn on Indian importers. Further, Indian import bills are usually drawn in India at 3 months' sight; there is also a fair proportion of 4 months' paper drawn, but, not many six months' bills are taken.[14] An idea of the maximum maturity period of bills of different

[14]Quoted by Muranjan, S K, *Modern Banking in India*, Kamala Publishing House, Bombay, 1952, p. 193.

kinds can also be obtained from the eligibility requirements for the purpose of rediscounting of bills with the RBI. While domestic commercial bills may have a maturity period of 90 days from the date of purchase or discount, export bills may have a maturity period of 180 days. Agricultural finance bills may have a maturity period of 15 months. A bill for financing cottage and small-scale industries should mature within 12 months.[15] The practices with regard to the maturity of bills are also determined by the commercial banks' preferences for particular maturities while discounting bills. Usually only those bills are discounted by banks that mature within 90 days. It is for this reason that, although the RBI has fixed a longer eligible maturity period for different bills, bills with a maturity period of 90 days are the most common and popular in India.

17.3.8 Bill Market Rates

A study of bill market rates in India is of great historical interest because most relevant bill market rates have ceased to be operative one after another and the RBI has stopped publishing them one after another. The relevant rates which once determined the cost of bill finance are (a) bank rate, (b) SBI *hundi* rate, (c) bazaar bill rate, (d) commercial banks' bill finance rate, and (e) SBI discount rate. The Bank rate is the rate at which RBI can rediscount eligible bills from commercial banks. The SBI *hundi* rate is the rate at which the SBI used to discount *hundis* of indigenous bankers. The bazaar bill rate was the rate at which Shroffs used to discount bills of small traders. The commercial banks' bill finance rate is the minimum rate fixed by the RBI at which commercial banks can discount bills. The SBI discount rate is the rate at which SBI discounts first class commercial usance bills.

17.3.9 Purpose

Commercial bills may be used for financing the movement and storage of goods between countries, before exports (pre-export credit), and also within the country. The origin and growth of bill finance in countries such as the United States and the UK took place mainly for financing international trade, and was used only to a limited extent for financing internal trade. Therefore, the size of the foreign trade sector and the importance of a particular city in international transactions can be said to have a close relation with the size and buoyancy of the bill market in that economy. In India the use of bill of exchange appears to be in vogue for financing agricultural operations, cottage and small-scale industries and other commercial and trade transactions. While agricultural bills are drawn for financing seasonal agricultural operations or marketing of crops, cottage and small industries bills are drawn for financing their production and marketing activities. Bill financing facilitates the establishment of an efficient system of payments. Since bills are self-liquidating because payment is assured on a due date, bill financing has an inherent discipline and it promotes efficient use of credit. It also ensures the liquidity of the assets of banks which can rediscount bills easily and rotate their funds better than in the case of cash credit.

17.3.10 Characteristics of a Well-Developed Bills Market

The first characteristic of a well-developed bills market is that the practice of borrowing against commercial bills is well-established and widespread. The supply of bills in such a market would be continuous and quite

[15]Yaswani, T A, *Indian Banking System*, Lalvani, Bombay, 1968, pp. 57–59.

large. The second characteristic is preference of commercial banks' to use a bill of exchange as an instrument for providing credit to their customers. More importantly, if any commercial bank discounts a bill, it is not required to hold that bill till maturity; the market offers facilities to rediscount that bill. In other words, the 'secondary' market in bills is also quite developed. The number of times a bill changes hands, that is, its velocity, would be higher in a well-developed bill market than where the secondary market in bills does not exist or is underdeveloped. The third sign of a well-developed bills market is the Central Bank's willingness to rediscount bills readily throughout the year. The fourth characteristic is ready availability of facilities for acceptance at a low cost. The availability of this service should be such that the risk of default in bill financing is greatly reduced. And finally, in a developed market a number of brokers and dealers in bills are expected to function to aid the smooth functioning of the bill market.

17.3.11 Measures to Promote Bill Market in India

Since its inception, the RBI has been attempting to develop the bill market in our country by offering rediscounting facilities to institutions which discount bills. In 1937, it proposed to extend, among others, direct rediscounting facilities to indigenous bankers if they agreed to change their accounting methods and made their accounts open to the RBI. In 1938, it offered to rediscount, through scheduled banks, the agricultural bills of approved money lenders. In the light of the importance of indigenous bankers in the money market in India, these attempts were in the right direction, but they have not met with success. There is a need to revive this line of policy in the interests of the growth of the bill market in India. Other efforts of the RBI to develop the bill market have taken the form of introduction of two bill market schemes, one in January 1952 and the other in November 1970. We will first examine the salient features of these schemes and then comment on them.

Bill Market Scheme (1952) The RBI on 16 January, 1952 introduced the first Bill Market Scheme under Sec. 17(4)(c) of the RBI Act, 1934. According to this scheme, advances were granted to scheduled banks by way of demand loans on the security of eligible[16] usance bills or promissory notes of their constituents. As banks normally finance business through loans, cash credit, and so on, they were allowed to convert a part of their advances into usance promissory notes of 90 days which they could lodge with the RBI as collateral for borrowing from the RBI. Although the facility was originally restricted to banks with deposits of ₹10 crore or more, it was later (in 1953) extended to banks with deposits of ₹5 crore or more; and in July 1954, all licensed scheduled banks became eligible for the facility.

The scheme provided for the lodgement of bills as security for loans from the RBI and not for their being rediscounted by it; it was open to the borrowing banks to withdraw any of the bills lodged as also to replace them by other eligible bills. Part payments of loans were also permitted.

To begin with, advances by the RBI were to be made at a concessional interest rate, that is, at a rate half a percent below the bank rate. The RBI was also to bear half the cost of stamp duty incurred in converting demand bills into time bills. In the period after 1952, the concessions were reduced in stages and they were all withdrawn by November 1956. In the beginning, the minimum limit of advance was fixed at ₹25 lakh and the minimum amount of each individual bill was fixed at ₹1 lakh. These minimum limits were successively

[16]Eligibility requirements are laid down in Section 17 of the RBI Act, 1934. These requirements relate to the purchaser of the bill, activity to be financed by it, its maturity and so on.

reduced to ₹5 lakh and ₹50,000 respectively, by February 1957. The scheme was extended in October 1958 to cover export bills so that banks could extend credit facilities to exporters on a more liberal basis. The provisions of the extended scheme were the same as given above except that the minimum amount of advance and the minimum amount of each individual bill were fixed at lower levels, that is, at ₹2 lakh and ₹20,000, respectively. These limits were further liberalised in October 1959 to ₹1 lakh and ₹10,000, respectively. In March 1963, some of the provisions of the extended scheme were changed. For example, banks could borrow from the RBI against their declarations (instead of actual usance bills) of outstanding export bills; the rate of interest to be charged was fixed at the level of the bank rate, and licensed scheduled banks which were authorised dealers became eligible for facilities; the bills could have usance of 180 days. In sum, the provisions were relatively liberal in comparison with those for internal bills and they were meant to aid the policy of export promotion in the event of a foreign exchange crisis in 1957.

Bill Market Scheme (1970) The next significant measure taken by the RBI for promotion of a bill market was in November 1970. Based on the recommendations of the Study Group chaired by Sri M Narasimham on enlarging the use of bill of exchange as an instrument of credit and creation of a bill market, the RBI introduced the New Bill Market Scheme (NBMS). According to this bill all licensed scheduled commercial banks are eligible for offering bills of exchange to the RBI for rediscount. Although this scheme is known as rediscounting scheme, the procedure prescribed for rediscounting implies that the RBI would, in fact, be making an advance against the security of a bill as in the case of the earlier scheme. It was earlier laid down that the RBI would not present for payment any bill of exchange rediscounted by it, and that such a bill has to be taken delivery of by the rediscounting bank against payment not less than 3 working days before the date of its maturity. Since November 1971, when banks were authorised to retain bills with them, the procedure followed is that banks endorse bills in favour of the RBI before including them in declarations and also re-endorse them in their own favour when they are retired. Further, it is possible for banks to relodge with the RBI for rediscounting purposes bills already rediscounted with it earlier.

The scheme covers only genuine trade bills which evidence sale of goods. The bill has to be drawn on, and accepted by the purchaser's bank and where the latter is not a licensed scheduled bank, the bill should, in addition, bear the endorsement of a licensed scheduled bank. The joint bills (drawn on the buyer and his bank) and bills jointly accepted are also eligible for rediscounting. The bill should have usance of 90 days but in exceptional cases it may have usance up to 120 days, provided at the time of offering it to the RBI for rediscounting it has a maturity not exceeding 90 days. Moreover, the bill should bear at least two good signatures. Those bills of exchange which arise out of sales of such commodities as the RBI may indicate from time to time, particularly those covered by selective credit controls, are excluded from the purview of this scheme. Originally, the minimum amount of a single bill was fixed at ₹5000 and the minimum limit of an advance was fixed up at ₹50,000. With effect from November 1971, banks are not required to deliver bills to the RBI, but are authorised to retain bills with them. Hence the regulation with regard to the minimum value of a single bill has now been dispensed with. The refinance facilities under the scheme are made available to banks throughout the year.

17.3.12 Appraisal of the Schemes

Keeping in view various characteristics of the well-developed bill market, these schemes must be regarded as but partial efforts; they do not contain any concrete and direct measures to develop all the paraphernalia of the

well-developed bill market, such as, the availability of acceptance services, services of dealers and brokers, inter-bank rediscounting of bills and so on. The schemes essentially aimed at increasing the availability of adequate "rediscounting" facilities with the central bank. It was expected that this would aid the development of other parts of the bill market. These hopes have been belied. The practice of discounting and rediscounting of bills in the real sense of the term is yet to take root in India. Both at the level of banks and the central bank, the practice is still to provide advances against the security of bills.

The 1970 scheme may be regarded as a slight improvement on the 1952 scheme. One of the major drawbacks of the earlier scheme was that it contained very little by way of an encouragement to increase the supply of bills. On the contrary, by permitting the conversion of cash credits/overdrafts into usance bills, it encouraged and strengthened the borrowers' preference for cash credits. The 1970 scheme tried to correct this lacuna by making only genuine bills eligible for rediscounting with the RBI. But this improvement has been negated by the policy of continuing the facility of 'conversion' just mentioned.[17] Other appreciable features of the latter scheme are (a) to provide bill finance in such a way that it does not undermine the selective credit control policy of the RBI; (b) to enable small transactions to be covered by the facility and (c) to provide bill finance throughout the year and not just to meet seasonal stringency. In purely quantitative terms, there is little evidence to show that these schemes have met with much success (see Table 18.1). They were primarily directed to provide liquidity or accommodation to banks and, therefore, they did not help much in developing the bill market. Meanwhile, with effect from June 1974, the RBI partially reversed its rediscounting policy after reviewing its role in bill financing. The RBI has come to feel that, although the growth of bill market needs to be promoted and while bill rediscounting facilities should continue, it was not necessary to provide a rediscount window as a source of funds because rediscounting of bills could be augmented by enlisting, besides the scheduled commercial banks, other financial institutions such as the UTI, LIC, GIC, ICICI and so on which have short-term surplus resources and which look forward to their gainful deployment. It was also thought that there was a need to prevent the use of the preferential treatment accorded to bills as a means of circumventing overall credit restraints.

At the same time, during the 1970s and 1980s, one committee after another highlighted and lamented the lack of development of the bill market, analysed the adverse effects of this, and suggested ways or measures to bring about a greater use of bill financing in India. In this context the work of the following is very important—the Tandon Committee, Chore Committee, Chakravarty Committee and Vaghul Working Group. As a result of the recommendations of these committees, the RBI has been endeavouring to develop the bill market in India. Some of the recent measures introduced by it are as follows:

(i) It has advised banks to fix for the CAS parties now coming under the Credit Monitoring Scheme, a minimum of 25 percent of their inland credit purchases as bill acceptance limit and a bill discounting limit of the same order by suitably reducing the facility against financing inland credit sales.

(ii) It approached the Government of India for the remission of stamp duty on bills of exchange. The Government of India has recently notified this permission and has removed a major hurdle as seen by the mercantile community in the development of the bill market.

[17]The 'conversion' facility makes one doubt whether the real motivation behind the earlier scheme was to induce increases in the supply of bills at all. The timing and circumstances of the introduction of the scheme suggest that the real motivation was to stabilise the government securities market, and to enable the government to undertake the sales of government securities. As in the case of aMOs, bill market policy also appears to have acted as an adjunct to the policy of stabilising government securities market. Another motivation appears to have been to provide liberal export finance as part of the policy to solve the foreign exchange crisis.

(iii) In order to simplify the procedures and documentation for facilitating successive rounds of rediscounting and thereby developing the secondary market for bills, it introduced in September 1988, a derivative usance promissory note to be issued by the discounter on the strength of underlying bills which have a tenor corresponding to or less than the tenor of the derivative usance promissory note and in any case not more than 90 days. The derivate promissory note has been exempted from stamp duty and a proforma which will facilitate successive rounds of rediscounting has also been specified.

(iv) It has made access to the bill rediscounting market less restrictive and increased the number of participants in the scheme by permitting a larger number of financial institutions including select urban co-operative banks eligible to rediscount bills. With effect from May 1990, the following institutions are permitted to participate in bills rediscounting scheme: (1) all scheduled commercial banks, (2) LIC and its subsidiaries, (3) GIC and its subsidiaries, (4) ICICI, (5) UTI, (6) IRBI, (7) ECGC, (8) IDBI, (9) SBI mutual fund, (10) select UCBs, (11) Canbank Mutual Fund, (12) IFCI, (13) DFHI, (14) NABARD, (15) NHB, (16) SCICI, (17) TFCI, (18) EXIM Bank, (19) LIC mutual fund, (20) MSCB, (21) SIDBI and so on.

(v) It has set up, jointly with banks and financial institutions, the DFHI as a major financial institution for the development of the money market including the market for commercial bills.

At the time of introducing the bill market scheme in 1971 and until June 1974, the RBI policy was to promote the development of bill market by increasing the rediscounting facilities with itself. In the subsequent period, however, these facilities were reduced more and more. The availability of funds from the RBI under the Bill Rediscounting Scheme was put on discretionary basis at the beginning of the 1980s, and in 1981–1982, the sanctioning of rediscounting limits to banks was altogether stopped. The amount of bills rediscounted with the RBI declined drastically during 1975–1980 and no bills appear to have been rediscounted with the RBI after 1980–1981. Ironically, this important policy change in the direction of progressive reduction in the facilities for bill discounting has occurred precisely when one committee after another went on emphasising the urgent need for developing the bill market. This policy has not worked as shown by the significant reduction in the share of bill finance in the total bank credit.

17.3.13 Size of Bill Market in India

There is no market in India for bills of exchange in the real sense of the term, except the one created by the RBI for the purpose of accommodation. Table 17.3 reflect certain features of the bill market in India. It shows that the share of bills (inland and foreign) purchased/discounted in the total bank credit (column 9) has fluctuated during 1951–2015. At first it increased substantially between 1950–1951 and 1970–1971; it then declined continuously and it has declined from 20.87 percent in 1970–1971 to 3.35 percent in 2014–2015. Columns 3 and 6 in Table 17.1 show that the supply of inland bills has been greater than that of foreign bills throughout the period. Subject to this, the share of inland bills and foreign bills in the total bill finance has shown ups and downs over the years. It can be observed that for both inland and foreign bills, banks prefer purchasing them to discounting them, but this preference is greater in the case of foreign bills. This pattern of preference has remained more or less the same during 1975–1976 to 1996–1997 in the case of foreign bills, but bills discounted became greater than bills purchased after 1993–1994 for both types of bills.

Table 17.3 Commercial bill financing in India (All scheduled commercial banks; ₹ in crore)

Year	*Inland bills*			*Foreign bills*			*Grand total*	*Total bank credit*	*7/8%*
	P[1]	*D[2]*	*T[3]*	*P[4]*	*D[5]*	*T[6]*	*[7]*	*[8]*	*[9]*
1950–1951	—	—	13	—	—	—	13	547	2.42
1960–1961	—	—	159	—	—	49	208	1320	15.80
1970–1971	—	—	753	—	—	210	963	4660	20.87
1980–1981	1421	860	2281	628	281	909	3190	25371	12.57
1990–1991	3375	2336	5711	2758	1851	4609	10320	116301	8.87
2001–2002	5031	18283	23314	9089	9714	18803	42117	589723	7.14
2002–2003	5584	20184	25768	9750	11624	21374	47142	729215	6.46
2003–2004	6969	21730	28699	10113	12733	22846	51545	840785	6.13
2004–2005	7554	25233	32787	10828	16602	27430	60217	1100428	5.47
2005–2006	12914	30816	43730	13075	19817	32892	76622	1507077	5.08
2006–2007	15919	31314	47233	16142	23944	40086	87319	1931189	4.52
2007–2008	12594	40553	53147	16499	30691	47190	100337	2361914	4.24
2008–2009	11740	43332	55072	18181	26555	44736	99808	2770012	3.60
2009–2010	12010	62220	74230	16130	32270	48400	122630	3244790	3.77
2010–2011	13440	79870	93310	18580	36180	54760	148070	3942080	3.75
2011–2012	16320	97910	114230	21150	40090	61240	175470	4611630	3.80
2012–2013	25270	111050	136320	21730	45610	67340	203660	5429960	3.75
2013–2014	38940	112180	151120	26740	50100	76840	227960	6198450	3.67
2014–2015	34970	122110	157080	24270	46030	70300	227380	6770360	3.35

Note: P = purchase; D = discounted; T = total
Sources: RBI, RCF, Various issues; RBI Bulletin, various issues.

17.3.14 Some Issues in Bill Financing in India

Apart from the small volume of bill finance, the underdeveloped character of the bill market in India is also reflected in certain other things. *First*, a large part of the bills discounted by banks are not genuine bills; but are created by converting cash credit/overdraft accounts of their customers. Second, bill finance provided by banks is often by way of loans against the security of bills and not by way of purchase or discounting of bills. Thus, the facilities for discounting bills in India are grossly limited compared to similar facilities in the UK and the United States. Third, when a bank discounts or purchases bills, it tends to hold them till the end of their maturity period. There is no practice of rediscounting bills with other banks which may happen to have excess liquidity. One of the important advantages of bill finance, namely, the tendency to even out liquidity within the banking system, does not exist in India. The only institution banks approach for rediscounting bills is the RBI, which therefore has to act as a lender of first resort rather than as a lender of last resort. Fourth, as mentioned earlier, the acceptance service in this market is very much restricted.

17.3.15 Factors behind Underdevelopment

In the light of the foregoing discussion, the question that needs to be answered is why, in spite of the encouraging official policy, has the bill market not developed in India. Several changes in the trading and finance sectors (and the lack of certain other changes) explain this phenomenon.[18] Incidentally, in countries, such as, the UK and the United States also, where bill markets were well developed and had the best institutional support, the volume of business in bills of exchange, during the period under discussion, tended to decline.

Development of Banking System Commercial bills serve the purpose of utilising a temporary surplus of funds in certain places and at certain times, and meeting a temporary need for funds in other places and at other times. They are useful particularly when there are no financial institutions which can link up places that have a temporary surplus of funds with those that are in deficit of funds. It is for this reason that, historically, bill markets were established and they grew when banks were highly localised in their business or in those countries where the banking system is composed of unit banks. In India, in the recent past, the number of branches of commercial banks has increased tremendously. This development must have facilitated the direct discounting and collection of bills by the branches of banks, and this retarded the development of the bill market. The developments with respect to the quick transfer and remittances of funds have also tended to narrow down the basis for creation of bills.

Pre-eminence of Foreign Trade Bill markets were mostly established for the purpose of financing foreign trade. In India, the share of foreign trade in the national income has remained quite small. Further, the continuation of the old practice of drawing export and import bills in foreign currency has restricted the scope for negotiation of such bills in the country.

Change in Structure of Internal Trade Changes that have been occurring in the structure of internal trade and industry have not been conducive to an increase in the supply of genuine bills. In this period, the government and the public sector units have become the most important buyers in the economy. The government has entered into trading activity in a big way through organisations such as FCI, MMTC, STC and so on. Today, the government does not prefer to finance its activities through bills of exchange. The government's participation in economic activity has led to an increase in the amount of 'supply bills' but not that of genuine bills of exchange.

Development of Alternative Flexible Sources of Credit System Bill financing can become popular when other forms of advances do not prove cheaper and safer. In India, borrowers have found the systems of cash credit and overdrafts cheaper and more convenient than bill financing. Stamp duty, particularly, has tended to make bill financing costlier. It would have been possible to reduce the cost of bill finance if there was an adequate supply of first class bills. But this presupposes the availability of first class acceptance services which we lack in the country. There was a possibility of encouraging the supply of genuine bills in spite of borrowers' preference for cash credit, if banks had shown a preference for bill finance. Banks have not done this because cash credits are equally self-liquidating and secure. From the banks' point of view, technically, the one unfavourable feature of cash credits as compared to bill finance is that the former is not shiftable unlike the latter. Banks cannot obtain refinance from the RBI against cash credits or overdrafts *per se*. This should have enabled banks to prefer bill finance to cash credit. In practice, this did not happen for two reasons. First, the technical shiftability of bills did not materialise for want of acceptance facilities from

[18]This discussion closely follows the excellent account in this regard in Muranjan, S K, *op. cit.*, pp. 138–49.

reputed institutions. Second, the Bill Market Scheme of 1952 made cash credits shiftable to the RBI through their conversion into bills. Thus, there were strong reasons, from the point of view of both borrowers and banks, to continue to prefer other forms of advances to bill finance. Trade and industry have shown reluctance and resistance to submit themselves to the discipline of bill finance and thereby lose the flexibility of the cash credit system.

Declining Popularity of *Hundi* as a Credit Instrument Historically, the bill market in India has been dominated by indigenous bankers who specialise in financing internal trade. The volume of bills discounted by them has remained small because they have to rely mostly on their own funds or on funds drawn from private sources. With the advancement of the financial system, the availability of funds to indigenous bankers from private sources has declined. Further, since 1965, the SBI has completely stopped the discounting of bills of indigenous bankers. Thus, the volume of funds made available by commercial banks in the *hundi* market has also declined during this period. The *hundies* had been excluded from the purview of the rediscounting schemes. *Hundies* do suffer from certain drawbacks, but they are still the prime and most ancient instrument of finance in India. No concerted efforts have been made to free *hundi* of its adverse features and to make it a basis for the development of the bill market. On the other hand, certain policy changes, such as, the income-tax order that all payments exceeding ₹25,000 which are claimed as deductions in expenditure should be made by crossed cheque or draft have tended to severely affect the use of *hundi* as a credit instrument because this order implies that payments above ₹25,000 by *darshani hundi* would not qualify for tax deductions. Efforts to integrate indigenous bankers with the organised financial system initiated in the 1930s were never renewed seriously in the plan period. The two bill market schemes ignored the indigenous bankers completely, which has restricted the scope for developing the bill market. During the entire plan period, the philosophy behind the policy for institutional development in the country has remained one of supplanting indigenous bankers whenever possible.

Other Factors The cumbersome procedures of discounting and rediscounting, the loss of interest on the part of banks in bill finance once the RBI continued granting refinance against bills, the absence of specialised credit information agencies and the reluctance of banks to exchange full credit information among themselves, and the growth of competing money market instruments such as inter-bank participations are the other factors behind the lack of development of the bill market in India.

17.4 DISCOUNT MARKET

17.4.1 Discounting Service

LO 4
Illustrate the Discount and Finance House of India

The efficiency of the money markets, indeed the efficiency of the entire monetary system, and the ability of money market institutions, such as, banks to continue as going concerns without countenancing the risk of insolvency or liquidation depends on the existence or availability of institutions, arrangements and services for the best liquidity management. That is, the participants in the money market must be in a position to command liquidity in times of need or crisis, and they must be in a position to even out the excesses or deficits in liquidity in different segments of the money market if the latter

are to function smoothly. Through efficient liquidity management, the monetary system works smoothly without experiencing gyrations of the money market rates or without being forced to suffer from monetary losses or liquidation.

Traditionally, in all countries the central banks help banks in their liquidity management by providing them discounting and refinancing facilities. One of the most important or primary functions of the central bank in any country has been to supply promptly and in abundance liquidity (funds) to banks on occasions when liquidity shortages threaten economic stability. The central bank performs this function through its discount window or discounting mechanism. Banks borrow funds temporarily at the discount window of the central bank; they are permitted to borrow or are given the privilege of doing so from the central bank against certain types of eligible paper (collateral), such as the commercial bill or treasury bill, which the central bank stands ready to discount (to rediscount, strictly speaking) for the purpose of financial accommodation to banks.

Over the years, certain important changes have taken place in the basic discounting mechanism. The term discounting has tended to acquire much broader meaning, scope and purpose than originally intended. Over time, the central bank has come to lend to banks on the basis of any collateral. Most banks' borrowings from the central bank are now accomplished straightaway, that is, in the form of advances without involving any customer IOUs or without discounting notes of business firms already held by banks. This borrowing takes place on the basis of banks' own promissory notes or some government securities as the collateral. Technically, this method of borrowing should be called advance rather than discounting or rediscounting. However, in popular terminology, the term 'discounting' has come to describe all borrowings by banks from the central bank, regardless of the technical details of how it is accomplished.

Similarly, it is not only in emergencies or for meeting liquidity or financial crises that the central bank supplies financial accommodation to banks. The discounts or advances or refinance from the central bank have become a routine (instead of panic-oriented) means of supplying funds to banks for temporary needs or short-term adjustments in the day-to-day course of events also.

The central bank, however, is only the ultimate and in a sense an exogenous source of funds to the money markets. In different countries, various institutional arrangements, facilities and practices have evolved which, in addition to the central bank, help to provide and smoothen liquidity flows in the money markets. In many countries, banks of various sizes, specialised dealers in bonds, bills and papers and financial institutions discount, rediscount and refinance money market instruments and smoothen the liquidity flows in the primary and secondary markets. In a country such as the UK, a unique, specialised, institutional set-up, namely, the discount houses exist to perform this task. A similar set-up is sought to be initiated in India also with the establishment of the DFHI. In the following sections, we discuss the specialised discounting institutions in the UK and India.

17.4.2 Discount Houses in the UK[19]

The London discount market is about 170 years old and it consists of about a dozen discount houses and about as many other firms which undertake similar work. The discount houses, some of which have subsidiaries, are the expert financial intermediaries which perform various specialised functions or tasks that no other financial

[19]Based on HMSO, Report of the Committee on the Working of the Monetary System, London, 1959, pp. 58–64; and Revell, Jack, *The British Financial System*, Macmillan, 1973, pp. 211–38.

institution will do. They smooth out irregularities in the movements of funds in money and credit markets, simplifying the functioning of banks, which enables them to provide credit free from the embarrassment of temporary disturbances in their liquidity. The discount houses are indispensable to the functioning of the monetary system in the UK.

Discount houses are strictly commercial concerns organised in the form of public companies which are owned and operated independently, unconnected with other financial institutions. They are engaged in the business of lending and borrowing which is predominantly secured. They lend short, but borrow even shorter. They operate as principals, dealers, jobbers, brokers and commission agents, and make their money from these activities. Their main business has changed over the years, that is, the instrument or security which formed the major part of their total assets has varied in different periods, depending on which instrument happened to be the main money market instrument in the relevant period. They operate both in the primary and secondary markets for financial instruments. On the whole, they deal in inland bills of exchange, foreign bills of exchange, treasury bills, gilt-edged securities of maturities of less than 5 years, negotiable certificates of deposit, local authorities' negotiable bonds, call money, foreign exchange, loans to local authorities and financial institutions, and the like. Thus, they lend to both the public and private sectors. They value their commercial bills business as a useful alternative to direct bank lending to the private sector. The commercial bill business of the discount houses had gone down drastically during the 1950s, but it picked up again in later years. Their services are virtually indispensable in selling treasury bills. Although their entry in short-term government bonds market is relatively new, they are still an important element in this market. The sources of funds of discount houses comprise their own capital, borrowings from the Bank of England, London clearing banks, Scottish banks, other UK banks, overseas and foreign banks and others. The major part of their borrowings (about 50 percent) comes from London clearing banks. They also accept deposits on call or short notice. They borrow money to finance the purchase of assets which they use as security for further borrowings.

The discount houses have a unique place in the functioning of the British monetary system in the sense that they have a special or privileged position vis-a-vis the Bank of England. Their privileged position stems from their capital strength and the confidence or reputation that they would meet their commitments under any circumstances. The Bank of England operates as the lender of last resort to these houses, and to these houses alone. It is through them that the Bank of England channels the cash required for cash reserves of the clearing banks and for general circulation. Whenever discount houses want to enter a new field, they have to obtain the permission of the Bank of England. The Bank of England also determines which assets of discount houses would be eligible for rediscount with it, and prescribes the proportions in which the various eligible assets should form a part of the collateral for borrowing from the bank. Discount houses earn their profits mainly by borrowing money more cheaply than they lend it. To a certain extent, their profits are also derived from the commission in respect of buying and selling of bills on behalf of customers outside banks, and from jobbing business, that is, by discounting more bills than they intend to hold. Since they deal in markets where rates of interest have been very volatile, their earnings are extremely variable from year to year.

17.4.3 Discount and Finance House of India

Working Group to Review the System of Cash Credit (Chore Group) also considered, in 1979, the question of setting up of a discount house in India and opined that the manner in which the discount houses in the UK

operate could be profitably adapted to the Indian conditions. The Chore Committee recommended that the proposed discount house should have the following functions, constitution, resources, and so on:[20]

(a) It should be the sole depository of the surplus liquid funds of the banking system as well as the non-banking financial institutions. (b) It should use surplus funds to even out the imbalances in liquidity in the banking system subject to the RBI guidelines. (c) It should create ready market for commercial bills, treasury bills and government/government-guaranteed securities by being ready to purchase from and sell to the banking system such securities.

The Chore Committee recommended that the discount house should be sponsored by the commercial banks, LIC, UTI and GIC with participation by the IDBI, ICICI, SFCs that it should be an autonomous body which should run on strictly commercial principles; and that the RBI should have powers to give directions to it. Its funds were expected to come from its own capital, borrowings from banks and other institutions mentioned above, together with borrowings from the RBI. It was visualised that the discount house would use its funds for investment in treasury bills, government and other trustee securities, commercial bills and working balance with the RBI. In spite of the explicit and detailed recommendation of the Chore Committee, the authorities did not think it advisable to set up the discount house for quite some time after the recommendation was made. Meanwhile, the Chakravarty Committee and Vaghul Committee studied the working of the Indian monetary system and money markets from various angles. The Vaghul Committee recommended once again that to deal in money market instruments an autonomous public limited company, to be called the Finance House, be set up jointly by the RBI, the public sector banks and the all-India financial institutions.

Eventually, the Discount and Finance House of India Ltd. was set up by the RBI with the objective of deepening and activating the money market. It became operative with effect from 25 April, 1988. It was a joint stock company in form and is jointly owned by the RBI, public sector banks and all-India financial institutions which have contributed its paid-up capital of ₹200 crore (the authorised share capital of ₹250 crore) in the proportion of 5:3:2. In addition, refinance facility with the RBI, and a line of credit of ₹100 crore from 28 public sector banks on a consortium basis are the sources of its funds. The RBI is to sanction a refinance limit for the DFHI against the collateral of treasury bills and against the holdings of eligible commercial bills. The line of credit from banks has been sanctioned at the rate of interest of 12.0 percent per annum. Further in the year 2004, DFHI has been merged with SBI Guilt Ltd., a subsidiary of SBI and a new company has been formed which is known as SBI DFHI Ltd. Now it has been considered as a primary dealer and it has been created by RBI to support the book-building process in primary auctions of government securities and provide necessary depth and liquidity to the secondary market in government Securities.

As a primary dealer, it trades in fixed income securities (treasury bills, government securities, state development loans, Non-SLR bonds, and corporate bonds) and short-term money market instruments (certificates of deposit, commercial paper, inter-corporate deposits, call and notice money deposits). It is active in retailing of government securities, including small lots, and is the distributors of mutual fund products of all leading funds. It also actively participates in the domestic interest rate derivatives and equities/equity futures markets. It is a market leader in the primary dealer segment of the domestic debt market, with a net worth of ₹910.21 crores (as on 31 March 2013) and a presence in all the major financial centres of the country. It posted an impressive total turnover of ₹408,087 crores in government securities/SDL and ₹56,858 crores in treasury bills, respectively, for the financial year 2012–2013.

[20]RBI, Report of the Working Group to Review the System of Cash Credit, Bombay, 1979, pp. 42–46.

17.5 MARKET FOR FINANCIAL GUARANTEES

17.5.1 Nature and Types of Guarantees

LO 5
Describe the market for financial guarantees

In financial markets, suppliers of funds face what is called lender's risk, that is, the eventuality that debtors may not honour their commitments arising out of loan transactions. The interest of depositors, as a special category of lenders, is protected in many countries, including India by deposit insurance. The other types of lenders also seek to minimise the risk they bear by asking for guarantee. In legal terminology, a contract of guarantee is a contract to perform the promise or discharge the liability of a third person in case of his default. Thus, in a loan transaction that is accompanied by a guarantee, there are three parties, the guarantor who gives the guarantee, the principal debtor and the creditor. In case of a default by the principal debtor, the guarantor becomes the debtor.

Guarantee is thus a form of security demanded by the creditor. It is, however, not always a substitute for tangible security. It is well known that creditors secure their advances against various types of tangible securities. In addition, they may also ask for guarantees from the borrowers. This is because the recovery of their money by liquidating security may not be adequate. In certain cases, however, guarantee may be sufficient to reinforce a clean advance. Normally, the responsibility of finding a guarantor rests with the borrower. But it is possible that where special (state) guarantee organisations exist, the creditor first makes a loan and then gets it guaranteed by such an organisation. In the previous case, the guarantee commission or fee has to be paid by the borrower, while in the latter case; the creditor may partly or wholly pay such a commission. As the purpose of seeking guarantee is to reduce the risk of default, it follows that the guarantor must be prestigious in the eye of the creditor, he or she must be one, or the organisation must be one of undoubted credit and must have sufficient means and adequate liquid assets. Guarantee can be oral or written, although most creditors would prefer the latter. A guarantee can be given either by one person or more than one person jointly or by an organisation.

The market for loanable funds is familiar with many types of guarantees. There are 'specific guarantees' and 'continuing guarantees'. While the former covers a single transaction, the latter covers a series of transactions. Then there are what are known as 'secured guarantees'. Such guarantees are backed by tangible security from the guarantor; such a security is charged on default by the principal debtor as well as the guarantor.[21]

A guarantee can be 'explicit' or 'implicit'. A case of the latter arises by the very circumstance or the nature of the transaction. For example, an endorser on a bill or a promissory note is liable as a guarantor to pay to the holder in respect of the debt represented by the instrument. The other important types of guarantees are financial (money or credit) guarantees, and performance guarantees.[22] While the latter cover performance of non-financial contracts including payment of earnest money, retention money, penalty charges and advance payments, the former cover purely financial contracts. In India, important examples of such contracts are (i) deferred payments for important and indigenous capital good; (ii) medium- and long-term loans raised

[21]Sometimes the term secured guarantee is used to represent a guarantee which is secured by the debtor by providing a tangible security. The distinction between the two types of secured guarantees is that in case of the latter, security is offered by the principal debtor, whereas in case of the former, it is offered by the guarantor and may be in addition to the fact that the debtor has already given a collateral.

[22]Strictly speaking, it is difficult to make a clear distinction between the two because financial guarantees in certain cases have an element of performance assessment, whereas performance guarantees are expressed in the form of money values.

abroad and (iii) credit advanced by domestic institutions, particularly banks, for various purposes. It means that guarantees to cover loans of all maturities are in vogue in India. In the following discussion, the major emphasis would be on financial guarantees although, wherever possible, a reference would be made to performance guarantees also.

17.5.2 Suppliers of Guarantees

We shall now discuss who in India offers guarantee service, for whom the service is made available, and what are the terms and conditions on which guarantees are usually issued. There are three major sources of guarantees: (a) personal, (b) governmental, and (c) institutional. Institutional sources can be subdivided into (i) specialised private guarantee institutions, (ii) financial institutions such as banks, insurance companies and statutory financial organisations, and (iii) specialised public guarantee institutions.

Personal Guarantees

Personal guarantee is the oldest form of guarantee service. It obviously represents an unorganised and, therefore, scattered and decentralised method of rendering this service. It would not be wrong to say that personal guarantees are more in vogue where the loan amount involved is small. In many cases, they may be issued in oral rather than written form. In the unorganised financial market in India, there is no doubt that oral personal guarantees help to see through many loan transactions. There are reasons to believe that in obtaining loans for consumptions and social purposes, personal guarantees are widely used in India. Although it is difficult to obtain statistics on the extent of borrowings backed by personal guarantees, they must be playing a significant role in terms of size and usefulness in the loanable funds market. In the agricultural sector, loans by co-operative institutions, agro-industries corporations, and so on, are advanced against personal sureties. Normally, these personal sureties are given by big land-owners. Personal guarantees are mainly for short-term credit.

In the organised sector also personal guarantees are common, although, over a period of time, their volume has relatively declined as a result of the changing institutional set-up. Banks and term-lending institutions used to give loans to industrial concerns on the basis of guarantees from managing agents, directors, and managerial personnel. Two developments have caused this practice to decline. First, the abolition of the managing agency system led to the disappearance of reputed, prestigious and creditworthy personal guarantors. Second, owing to the rise of a new entrepreneurial class, professionalization of managerial cadres and improvement in the technique of financial and technical appraisal of proposals for assistance, the need to obtain guarantees as a matter of course has declined. The official policy has been to reduce the dependence on such personal guarantees in matters of industrial finance. Since July 1970, the RBI has been encouraging credit institutions to be discretionary in seeking personal guarantees while making industrial loans.

While in the industrial sector the use of personal guarantees has tended to decline, in the agricultural sector it has tended to increase as a result of the spread of banking to rural areas. In the post-nationalisation period, the changing concept of lending has meant that banks are required to make unsecured loans to farmers and others. They are doing so on the basis of personal guarantees of two persons.

Guarantees by the Government

The central and state governments are also known to provide guarantees in various cases. The state and central co-operative banks are always short of resources. The rate of default on their loans is also relatively high.

The commercial banks and the RBI supplement the resources of cooperative banks by way of keeping long-term deposits with them, subscribing to their debentures or giving loans to them. But they do so only after obtaining guarantees from the respective state governments. The governments also give guarantees on behalf of public sector enterprises to cover the latter's borrowings. There is also a current practice of governments offering counter-guarantees in respect of bank guarantees extended on behalf of public corporations and other bodies. There have also been instances of state governments offering counter-guarantees to banks to cover the latter against their own guarantees on behalf of joint stock companies. The governments guarantee the issues of rural debentures and debentures issued by apex housing finance societies. The state governments guarantee amounts which are due to NABARD from institutions assisted by it. The central government guarantees the shares of NABARD as to the repayment of the principal and payment of a minimum annual dividend at a rate determined by the government. There is no specialised private institution providing guarantee service in the credit market.

Guarantees by Financial Institutions

In terms of the number of financial institutions providing guarantees, the market for credit guarantees in India can be regarded as well-developed. Commercial banks, insurance companies and most of the statutory financial institutions at the state and central level now provide guarantees. As most of these institutions came into existence after 1950, the diversification of the credit guarantee market can be said to have taken place during the last few decades. It is, however, to be noted that for each one of these institutions the provision of guarantees is only a side business. The guarantees they issue are principally on behalf of parties who are their clients in some other field. The nature of the guarantee work they undertake is often closely related to their other business. For example, guaranteeing by insurance companies of advances to hire-purchase companies in respect of sales of motor vehicles is intimately related to their motor insurance business. It is a mixed market in the sense that while these institutions issue guarantees, they also demand such guarantees while making advances. A brief description of the guarantee service provided by major groups of financial institutions is as follows.

Commercial Banks As one of the most important financial intermediaries, it is but natural that commercial banks should engage in the guarantee business on a significant scale. They provide guarantees on behalf of their customers for the fulfilment of obligations undertaken by the latter. As the expansion of banks' guarantee business is said to have implications for the safety and efficiency of the overall banking business, the RBI had appointed in 1967 a committee with Mr. B.N. Adarkar as its Chairman to study various aspects of banks' guarantee business. The committee had obtained by survey method valuable information on the magnitude and composition of the guarantee business of banks.[23] Banks provide performance as well as financial guarantees. As a part of the former, they undertake to guarantee the performance of contracts entered into by their customers in respect of construction work and supply and purchase of goods. They also guarantee export performance of their constituents in cases where imports of machinery or the payment of royalty in respect of a patented process is permitted only on the promise of export performance. As a result of the expansion in outlay in the public sector and the priority assigned to the export sector, the scope for providing performance guarantees has greatly expanded during the plan period. Official policy, however, has been to discourage banks from providing performance guarantees as far as possible. Financial guarantees executed by banks are of several types: (a) Those that are in the nature of a service facility and are casual

[23]See Report of the Informal Advisory Committee on Bank Guarantees', *RBI Bulletin*, May 1967, pp. 580–600.

and temporary. They are the banks' certification of the financial ability of their constituents to meet certain payments or dues. Guarantees to government departments in lieu of earnest money or to customs and railway authorities for the payment of duties or freight are included in this category, (b) Guarantees to cover import of goods or purchase of indigenous machinery on deferred payment terms, (c) Guarantees to cover payment of loans taken from other financial institutions, and (d) Guarantees in lieu of inland letters of credit in respect of supply of goods or in respect of payments to government departments of dues, taxes and the like are also included in this category.

Banks' guarantees are provided to the government and other public authorities, foreign sellers in respect of imports on deferred payment basis, and to others. The maturity period of loans guaranteed by banks is predominantly short-term. With the expansion of term loans by banks and by statutory financial institutions, and with the growth of facilities for acquiring equipment and machinery on deferred payment basis, there must have occurred a lengthening of the maturity period of guarantees during the previous decades. Banks have been advised by the authorities not to issue guarantees of maturity beyond 10 years. The guarantee commission charged by banks is usually 1 percent per year. The information on the average size of guarantees from banks supports the argument that banks' services are concentrated in favour of big and well-established business units. Commercial banks try to reduce the risk in their guarantee business by preferring to issue, wherever possible, secured guarantees. These guarantees are secured by deposit of cash, lodgement of securities, or tangible assets, and a reduction in the drawing power of the debtor. In several cases, banks obtain counter-guarantees. But banks provide unsecured guarantees also. Such guarantees are usually casual in nature; they are individually for short periods and for relatively small amounts. The willingness of banks to issue unsecured guarantees depends on the status of the customer, his standing with the bank as a deposit or credit customer, the purpose for which it is asked and similar considerations.

The Committee on Bank Guarantees was exercised over the question of how far banks should give unsecured guarantees. Its outlook on this question was 'conservative'. Its position was 'as regards unsecured guarantees, both safety and liquidity are involved and the Committee would therefore like this form of guarantees to be brought under stricter regulation.'[24] There is a need to examine this question particularly in view of a changed economic environment. First, if both the creditor and the guarantor demand tangible security, from where is the debtor to produce such security? The recommendation is highly restrictive from the point of view of the borrower; it discriminates against those borrowers who lack such securities but who are otherwise credit-worthy. Second, it is not in consonance with the changing concept of bank lending. The practice of issuing unsecured guarantees should, therefore, be encouraged just as the practice of giving unsecured advances is being encouraged.

Insurance Companies Insurance companies issue four types of guarantees: (a) guarantees relating to performance of non-financial contracts; (b) guarantees on behalf of hire-purchase companies to banks and other institutions from whom the former borrow against their receivables; (c) guarantees to cover deferred payments to supplier of equipment, to suppliers' bankers and to buyers' bankers and (d) guarantees to cover term loans from banks. Insurance companies usually do not guarantee bank advances for working capital purposes. When insurance companies guarantee loans from one company to other companies, or to dealers, they do not follow the practice of issuing blanket guarantees to cover all its loans or all debts owed to it by various dealers. The company concerned has to obtain a credit guarantee for each dealer, or each debtor

[24]Report of the Informal Advisory Committee on Bank Guarantees", *RBI Bulletin*, May 1967, p. 589.

company, separately. Insurance companies are reported to offer guarantees up to 8 percent of the value of the transaction in respect of hire-purchase finance companies and a full 100 percent in respect of others. As in the case of banks, insurance companies try to obtain counter-guarantees when they issue guarantees in order to reduce their part of the risk. Sometimes they demand from the party a second mortgage on its assets in their favour.

The maturity period of guarantees issued by insurance companies is between 6 months to 1 year. In case of deferred payment guarantees, however, the maturity period has to be much longer. The description of the type of guarantees given by insurance companies suggests that a significant part of their guarantee business probably cover medium- and long-term loans. The guarantee commission charged by them is invariably 1 percent per annum or 0.25 percent for every quarter of the year or a part of that. A significant portion of guarantees (about 50 percent) issued by insurance companies is given to banks or financial institutions who, in turn, give guarantees to creditors, suppliers or contract-giving parties. Such an indirect method of providing guarantees has come into vogue because governments and overseas companies are prepared to accept guarantees only from banks and other prestigious institutions mentioned above. Insurance companies seldom give guarantees on behalf of parties who are not their customers.

Other Financial Institutions The extent of availability of guarantee service in India has widened since 1950 because of the creation of many new statutory financial institutions and the expansion of their business. Today, all these institutions extend guarantees for one purpose or another. The IFC guarantees (a) loans raised by industrial concerns from scheduled banks or state cooperative banks, (b) deferred payments in connection with the purchase of capital goods and (c) loans raised from, or credit arrangements made by, industrial concerns with any bank or financial institution outside India in foreign currency. Similarly, SFCs guarantee loans raised by industrial concerns which are repayable within 20 years. They normally issue only secured guarantees. SIDCs extend guarantees for loans and deferred payments on behalf of industrial concerns. The NSIC guarantees loans from banks and similar institutions to small industrial units.

Specialised Public Guarantee Institutions The government has set up and reorganised different institutions whose only function is to provide guarantees. These institutions are (a) Deposit Insurance and Credit Guarantee Corporation (DICGC) and (b) Export Credit Guarantee Corporation (ECGC). The objective behind creating these institutions is to direct credit to priority sectors. Given the conservative lending policies of financial institutions, particularly banks, and given the fact that many borrowers who belong to the priority sectors do not possess enough eligible tangible assets to offer as security, it was necessary to mitigate the disadvantage to these borrowers in their borrowing programmes. The creation of specialised guarantee agencies was thought to be a way out of these difficulties.

Deposit Insurance and Credit Guarantee Corporation (DICGC) The Deposit Insurance Corporation (DIC) Bill was introduced in Parliament on 21 August, 1961. After it was passed by the parliament, the bill got the assent of the President on 7 December, 1961 and the Deposit Insurance Act, 1961 came into force on 1 January, 1962. Deposit Insurance Scheme was initially extended to all the functioning commercial banks. This included the State Bank of India and its subsidiaries, other commercial banks and the branches of the foreign banks operating in India. With the enactment of the Deposit Insurance Corporation (Amendment) Act, 1968, deposit insurance was extended to co-operative banks. The Government of India, in consultation with the Reserve Bank, introduced a credit guarantee scheme in July 1960. The Reserve Bank also promoted a public limited company on 14 January, 1971, named the Credit Guarantee Corporation of India Ltd. (CGCI). The credit guarantee schemes introduced by the CGCI aimed at encouraging the commercial banks to cater

to the credit needs of the hitherto neglected sectors, particularly the weaker sections of the society engaged in non-industrial activities, by providing guarantee cover to the loans and advances granted by the credit institutions to small and needy borrowers covered under the priority sector as defined by the RBI.

With a view to integrating the functions of deposit insurance and credit guarantee, the two organisations, *viz.*, the DIC and the CGCI, were merged and the Deposit Insurance and Credit Guarantee Corporation (DICGC) came into existence on 15 July, 1978. The DICGC guarantees loans to a wide spectrum of borrowers such as transport operators, retail traders, professionals and self-employed persons, business enterprises owned and managed by individuals, farmers, joint Hindu families, groups or associations of persons and so on. It provides guarantee support in order to maintain the increased flow of credit for all priority sector activities. It has enlarged the scope of guarantee support to cover the entire priority sector advances with effect from 1 April, 1989. The DICGC operates the following five credit guarantee schemes: (a) Small Loans Guarantee Scheme, 1979; (b) Small Loans (Financial Corporations) Guarantee Scheme, 1971; (c) Service Co-operative Societies Guarantee Scheme, 1971; (d) Small Loans (Co-operative Banks) Guarantee Scheme, 1984; and (e) Small Loans (Small-Scale Industries) Guarantee Scheme, 1981.

The types of credit institutions covered by the DICGC are also diverse. They include commercial banks, cooperative banks at the central, state and primary levels, RRBs, SFCs and service co-operative societies. Under the provisions of Section 16(1) of the DICGC Act, the insurance cover was originally limited to ₹1500 only per depositor for deposits held by him in 'the same capacity and in the same right' at all the branches of a bank taken together. However, the Act also empowers the corporation to raise this limit with the prior approval of the central government. Accordingly, the insurance limit was enhanced from time to time as follows:

Effective from	*Insurance limit (₹)*
1 May 1993	100,000
1 July 1980	30,000
1 January 1976	20,000
1 April 1970	10,000
1 January 1968	5000

Premium rates per deposit of ₹100

Date from	*Premium (in ₹)*
1-04-2005	0.10
1-04-2004	0.08
1-07-1993	0.05
1-10-1971	0.04
1-01-1962	0.05

The corporation insures all bank deposits, such as savings, fixed, current, recurring *and so on* except the (i) deposits of foreign governments, (ii) deposits of central/state governments, (iii) deposits of state land development banks with the state co-operative banks, (iv) inter-bank deposits, (v) deposits received outside India and (vi) deposit specifically exempted by the corporation with the previous approval of the Reserve Bank. The corporation collects insurance premia from insured banks for administration of the deposit

insurance system. The premia to be paid by the insured banks are computed on the basis of their assessable deposits.

Export Credit and Guarantee Corporation (ECGC) It was set up in January 1964 with the objective of offering financial protection to the exporter and improving his financial standing vis-a-vis his bankers. The corporation has set before itself the following objectives:[25]

1. To encourage and facilitate globalization of India's trade.
2. To assist Indian exporters in managing their credit risks by providing timely information on worthiness of the buyers, bankers and the countries.
3. To protect the Indian exporters against unforeseen losses, which may arise due to failure of the buyer, bank or problems faced by the country of the buyer by providing cost-effective credit insurance covers in the form of policy, factoring and investment insurance services comparable to similar covers available to exporters in other countries.
4. To facilitate availability of adequate bank finance to the Indian exporters by providing surety insurance covers for bankers at competitive rates.
5. To achieve improved performance in terms of profitability, financial and operational efficiency indicators and achieve optimum return on investment.
6. To develop world class expertise in credit insurance among employees and ensure continuous innovation and achieve the highest customer satisfaction by delivering top-quality service.
7. To educate the customers by continuous publicity and effective marketing.

The scope of its activities is wider in the sense that it helps to reduce not only the risk of default of a loan, but also other risks. Its business falls under two heads: export credit insurance and export credit guarantees. We are interested in the latter which are financial guarantees issued to banks to cover their advances to exporters both at the pre-shipment and post-shipment stages. These financial guarantees protect the banks against any loss in their credit to exporters and thereby encourage banks to advance funds to exporters to fulfil their export commitments. The ECGC provides different types of financial guarantees: (a) packing credit guarantee, (b) post-shipment export credit guarantee, (c) export finance guarantee, and (d) export production finance guarantee. The major non-financial guarantees extended by ECGC are (a) export performance guarantee, (b) transfer guarantee, and (c) investment insurance guarantee. The last facility was introduced in September 1978 to protect Indian entrepreneurs willing to invest abroad against political risks arising out of war, expropriation, restrictions on remittances and so on. The extent of guarantee cover provided by the ECGC has changed from time to time and is somewhat flexible. In 1974–1975, it was raised from 66 to 75 percent of the default or loss. Recently, the ECGC has raised this cover to 90 percent at the request of banks. The rate of commission charged has also varied over a period of time. Normally, it charges a premium of 7.5 paise per ₹100 per month or 0.9 percent per annum. But it often offers a concessional rate which varies between 0.45 and 0.54 percent per annum. The concessional rate charged is linked with the extent of cover of loss requested; the higher the cover, the higher the rate. The rate charged by ECGC is thus higher than the rate charged by both the CGO and the DICGC because the degree of risk involved in the export business is supposed to be greater than that in domestic transactions. The ECGC's commission rate, however, is lower than the one charged by banks and insurance companies.

[25]http://www.ecgcindia.in/en/Pages/ECGCAPObjectives.aspx?qstrSelVal=Objectives, dated 14 June, 2014.

SUMMARY

- Two new money market instruments, CDs and CPs, were introduced in India in June 1989 and January 1990, respectively.
- CPs are finance papers such as treasury bills. They are unsecured, negotiable, short-term usance promissory notes with fixed maturity. They are quite safe and highly liquid.
- CPs are mostly issued to finance current transactions, and seasonal and interim needs for funds. They are rarely issued to finance fixed assets and permanent working capital.
- The RBI has issued a number of guidelines regarding the issues of CPs and CDs. Initially, these guidelines were quite stringent, but they have been 1iberalised over time.
- Any person, bank, company, incorporated and unincorporated bodies and NRIs can invest in CPs.
- The maturity period of CPs can vary from 7 days to 1 year. However, the maturity date of the CP should not go beyond the date up to which the credit rating of the issuer is valid.
- Interest rates on CPs are market-determined. The cost of CP finance is lower than or comparable to that of bank credit.
- CDs are marketable receipts in bearer or registered form of funds deposited in banks for a specified period at a specified rate of interest. They are transferable, negotiable, short-term, fixed-interest bearing, maturity dated, highly liquid, and riskless money market instruments.
- Banks issue CDs to compete with other financial intermediaries and to counter the process of securitisation.
- CDs can be issued to individuals, corporations, companies, trusts, funds, associations, and NRIs.
- Minimum amount of a CD should be ₹1 lakh, that is, the minimum deposit that could be accepted from a single subscriber should not be less than ₹1 lakh and in multiples of ₹1 lakh, thereafter.
- The maturity period of CDs issued by banks should not be less than 7 days and not more than 1 year, from the date of issue. The FIs can issue CDs for a period not less than 1 year and not exceeding 3 years from the date of issue.
- The rate of interest on CDs is also market-determined and it is more attractive than that on bank deposits.
- Both primary and secondary markets for CPs and CDs are as yet underdeveloped in India. The presence of the DFHI should help to develop these markets.
- The size of the CDs market is much bigger than that of the CPs market.
- The amounts and interest rates on both CDs and CPs have been subject to a high degree of both intra-year and inter-year fluctuations.
- A commercial bill or a bill of exchange is a short-term, negotiable and self-liquidating money-market instrument which evidences the liability to make a payment on a fixed date when goods are bought on credit. It is an asset with a high degree of liquidity and a low degree of risk.
- The two main types of bills are demand bill and usance bill. A demand bill is payable 'at sight' or 'on presentment' to the drawee. Usance or time bill is payable at a specified later date.
- Bills can also be classified as clean bills, documentary bills, inland bills, foreign bills, accommodation bills, and supply bills.
- Commercial bills are used to finance the movement and storage of agricultural and industrial goods in domestic and foreign trade.
- The indigenous variety of a bill of exchange is called a *hundi*. It has a long tradition of use by indigenous bankers for financing the movement of agricultural produce.

- The financial service of acceptance is important for increasing the liquidity of commercial bills. It refers to the sale (for a fee) of the use of a name as an effective guarantor that there will be no default on the bill of exchange.
- The normal maturity period of bills varies considerably as follows: (a) usance *hundi*: 30–120 days; (b) export bills: 90 days; (c) import bills: 60 days; and (d) internal trade bills: 90–180 days.
- The bill market in India is underdeveloped; there is little market for bills of exchange in the real sense of the term, except the one created by the RBI for the purpose of accommodation. There is no continuous and substantial supply of bills; the well-established and widespread practice of borrowing against bills is absent; and commercial banks do not make much use of bill of exchange while providing credit.
- So far the RBI has introduced two bill market schemes, one in 1952 and the other in 1970, to develop the bill market.
- The rates which reflect the cost of bill finance are bank rate, SBI *hundi* rate, bazaar bill rate, SBI discount rate, and commercial banks' bill finance rate. Most of these rates have ceased to be operative one after another.
- The RBI used to prescribe a ceiling on the rate of discount at which a bill could be discounted by banks with other commercial banks and with approved institutions. With effect from May 1989, this ceiling has been withdrawn by the bank.
- There is a limited market in India for long-term bills also. This market has come into being with the introduction of the Bills Rediscounting Scheme by the IOBI, SIOBI, and so on, for the purpose of rediscounting bills arising out of the sale of machinery on deferred payment basis.
- The volume of bills rediscounted by the RBI, lOBI and other all-India FIs has declined over the years, indicating that the availability of rediscounting facility has declined with the passage of time.
- The term, 'discounting' now often refers to lending not only against bills of exchange but also in the form of direct loans and advances.
- Discount and Finance House of India Ltd. was set up by the RBI with the objective of deepening and activating the money market. It became operative with effect from 25 April, 1988. It was a joint stock company in form and is jointly owned by the RBI, public sector banks and all-India financial institutions.
- Further in the year 2004, DFHI has been merged with SBI Guilt Ltd., a subsidiary of SBI and a new company has been formed which is known as SBI DFHI Ltd. Now it has been considered as a primary dealer and it has been created by RBI to support the book-building process in primary auctions of government securities and provide necessary depth and liquidity to the secondary market in government securities.
- It plays a developmental as well as stabilising role in the Indian money market. It aims at smoothening liquidity imbalances by developing active primary and secondary markets in all money market instruments.
- Guarantee is a form of security demanded by the creditor. A guarantee can be given either by one person or more than one person jointly or by an organisation. The market for loanable funds is familiar with many types of guarantees. These are 'specific guarantees' and 'continuing guarantees'.
- There are three major sources of guarantees: (a) personal, (b) governmental, and (c) institutional. Institutional sources can be subdivided into (i) specialised private guarantee institutions, (ii) financial institutions such as banks, insurance companies and statutory financial organisations, and (iii) specialised public guarantee institutions.

- DICGC provides guarantee support in order to maintain the increased flow of credit for all priority sector activities.
- The DICGC insures all bank deposits, such as savings, fixed, current, recurring *and so on*. except the (i) deposits of foreign governments; (ii) deposits of central/state governments; (iii) deposits of state land development banks with the state co-operative banks; (iv) inter-bank deposits; (v) deposits received outside India; and (vi) deposit specifically exempted by the corporation with the previous approval of the Reserve Bank.
- The ECGC provides different types of financial guarantees: (a) packing credit guarantee, (b) post-shipment export credit guarantee, (c) export finance guarantee and (d) export production finance guarantee.

KEY TERMS

Commercial Paper
Corporate Paper
Euro-Commercial Paper
Certificate of Deposits
Commercial Bills
Demand Bill
Time Bill
Clean Bill
Documentary Bill
Inland Bill
Foreign Bill
Discount Finance House
Financial Guarantee
Personal Guarantee
Deposit Insurance and Credit Guarantee Corporation
Export Credit Guarantee Corporation

QUESTIONS

1. Explain the nature and characteristics of commercial paper market abroad.
2. How has the growth of commercial paper market taken place in India?
3. What is the impact of the introduction of commercial paper in India in the business of commercial banks?
4. Discuss the nature and importance of certificate of deposits abroad.
5. What is the importance of issuing certificate of deposits by banks in the existence of efficient secondary market for them?
6. Define certificate of deposit and highlight the different schemes introduced by RBI to develop the certificate of deposits market in India.
7. 'There is a potential for the growth of primary and secondary markets for certificate of deposits in India.' Comment.
8. Analyse the trends in size and interest rates of commercial papers and certificate of deposits in India during the period of liberalisation.
9. What are the recent steps taken by RBI to develop the CP and CD market in India?
10. What is bill of exchange? Explain the different types of bills of exchange in India.
11. How does a bill of exchange come into existence?
12. How far the bill market has developed in India?

13. Examine the salient features of different bill market schemes.
14. Highlight the recent measures introduced for the development of the bill market in India.
15. Inspite of the encouraging official policy, why the bill market has not developed in India?
16. Discuss about the market for long-term bills in India.
17. Write a brief note on discounting service and its importance in money market.
18. How have the discounting houses in UK occupied a unique place in the functioning of the British monetary system?
19. Analyse the nature, characteristics and functions of discount and finance house of India.
20. What is the difference between the DFHI and STCI and what are the basic functions of STCI?
21. Analyse the trends in volume and composition of business of DFHI and STCI during the period of liberalisation.
22. Give a brief explanation of nature and types of guarantees.
23. What are the different types of financial guarantees executed by the commercial banks and insurance companies and other financial institutions?
24. Which are the specialised public guarantee institutions set up by government and how they are working in India during these recent periods?
25. Comment on the following statements:
    (i) The institutional market for financial guarantees in India is quite well-developed today.
    (ii) With the growth of specialised guarantee agencies, the availability of unsecured guarantees has also increased.
    (iii) Commercial banks are the most expensive source of guarantee service.
26. Write notes on following:
    (i) Accommodation bills and supply bills
    (ii) Acceptance service
    (iii) Maturity of bill of exchange
    (iv) Appraisal of the bill market schemes
    (v) Bill market rates
    (vi) Personal guarantees
    (vii) Government guarantees
    (viii) Export Credit and Guarantee Corporation (ECGC)
    (ix) Deposit Insurance and Credit Guarantee Corporation (DICGC)
    (x) Credit Guarantee Organisation
    (xi) Credit Guarantee Corporation

Bond Market

18 CHAPTER

Learning Objectives

- **LO 1** Identify the features of bond and the risks involved in it
- **LO 2** Know how to find the value of a bond
- **LO 3** Compare the relationship between coupon rate, discount rate, values of the bond and par value
- **LO 4** Discuss various types of yield measures and yield curves
- **LO 5** Understand government security market in detail
- **LO 6** Review the corporate bond market in India
- **LO 7** Explain the Public Sector Undertaking (PSU) bond market in India

18.1 INTRODUCTION

Bonds are the long-term fixed-income securities that are issued by the government and the corporations. The coupon, maturity, principal and the ownership are the important features of a bond. The *coupon* of a bond indicates the income that the bond investor receives over the life of the bond. The *term to maturity* specifies the date or the number of years a bond matures. There are two different types of maturities associated with the bond. The most common is the *term bond*, which has a single maturity date and a *serial obligation bond* which has a series of maturity dates. Each maturity is a subset of the total issue, but has the different coupon rate. The *principal or the par value* is the original value of the obligation. In terms of ownership, the bonds can be classified into two types such as bearer bond and registered bond. In the case of *bearer bond* the bearer or the holder of the bond is the owner, so the bond issuer does not keep any record of ownership. Interest from the bearer bond is obtained by clipping coupons attached to the bonds and sending them to the issuer for payment. In contrast, the issuer of the *registered bond* maintains the records of the owner and pays the interest directly to the owner.

The bond market in India consists of mainly two categories—the government securities comprising central government and state government securities, and the corporate bond market. In order to finance its fiscal deficit, the government floats fixed-income instruments and borrows money by issuing dated government securities that are sovereign securities issued by the Reserve Bank of India (RBI) on behalf of the Government

of India. The corporate bond market consists of financial institutions (FI) bonds, public sector units (PSU) bonds, and corporate bonds/debentures. In this chapter, different concepts related to various types of bonds, various aspects of the working of the market in government securities, corporate bond market and public sector bonds in India are discussed.

18.2 BASIC FEATURES OF BONDS

LO 1

Identify the features of bond and the risks involved in it

The key components of corporate bonds are given as follows:

Issue Price is the price at which the corporate bonds are issued to the investors. Issue price is mostly same as face value in case of coupon-bearing bond. In case of non-coupon-bearing bond (zero coupon bond), security is generally issued at discount.

Face Value *(FV)* is also known as the par value or principal value. Coupon (interest) is calculated on the face value of bond. FV is the price of the bond, which is agreed by the issuer to pay to the investor, excluding the interest amount on the maturity date. Sometimes, issuer can pay premium above the face value at the time of maturity.

Coupon/Interest is the cash flow that is offered by a particular security at fixed intervals/predefined dates. The coupon expressed as a percentage of the face value of the security gives the coupon rate.

Coupon Frequency means how regularly an issuer pays the coupon to holder. Bonds pay interest monthly, quarterly, semi-annually or annually.

Maturity date is a date in the future on which the investor's principal will be repaid. From that date, the security ceases to exist.

Call/Put option date is the date on which issuer or investor can exercise their rights to redeem the security.

Maturity/Redemption Value is the amount paid by issuer other than coupon payment. If the redemption proceeds are more than the face value of the bond/debentures, the debentures are redeemed at a premium. If one gets less than the face value, then they are redeemed at a discount and if one gets the same as their face value, then they are redeemed at par.

18.2.1 Types of Risks Involved in Bonds

Credit or Default risk is the risk that a company will fail to timely make interest or principal payments and thus default on its bonds. Credit ratings try to estimate the relative credit risk of a bond based on the company's ability to pay. Credit rating agencies periodically review their bond ratings and may revise them if conditions or expectations change. The corporate bond contract (called an *indenture*) often includes terms called *covenants* designed to limit credit risk.

Interest Rate Risk: The price of a bond will fall if market interest rates rise. A bond's maturity and coupon rate generally affect its sensitivity to changes in market interest rates. The longer the bond's maturity, the more time there is for rates to change and, as a result, affect the price of the bond.

Inflation Risk: Inflation is a general rise in the prices of goods and services, which causes a decline in purchasing power. With inflation over time, the amount of money received on the bond's interest and principal payments will purchase fewer goods and services than before.

Liquidity Risk: Liquidity is the ability to sell an asset, such as a bond, for cash when the owner chooses. Bonds that are traded frequently and at high volumes may have stronger liquidity than bonds that are traded less frequently. Liquidity risk is the risk that investors seeking to sell their bonds may not receive a price that reflects the true value of the bonds (based on the bond's interest rate and credit-worthiness of the company).

Call Risk: The terms of some bonds give the company the right to buy back the bond before the maturity date. This is known as calling the bond, and it represents 'call risk' to bondholders.

18.2.2 Valuation of Bond

LO 2

Know how to find the value of a bond

The value of a bond is equal to the sum of the present value of its future cash flows. It is represented as follows:

$$V_0 = \sum_{t=1}^{M} \frac{CF_t}{(1+R)^t} = \frac{CF_1}{(1+R)^1} + \frac{CF_2}{(1+R)^2} + \ldots + \frac{CF_M}{(1+R)^M} \tag{18.1}$$

V_0 = Value of price of the bond

CF_t = Bond's expected cash flow in the period 't'

R = Discount rate (Investor's required rate of return)

M = term to maturity of the bond

The value of the bond paying a fixed coupon interest each year (coupon is paid annually) and the principal at the maturity, the value of the bond will be as follows:

$$V_0 = \sum_{t=1}^{M} \frac{C}{(1+R)^t} + \frac{F}{(1+R)^M}$$

F = Par value or face value of the bond.

$$V_0 = \frac{C}{(1+R)^1} + \frac{C}{(1+R)^2} + \ldots + \frac{C}{(1+R)^M} + \frac{F}{(1+R)^M}$$

$$V_0 = C\sum_{t=1}^{M} \frac{1}{(1+R)^t} + \frac{F}{(1+R)^M} \tag{18.2}$$

where $\sum_{t+1}^{M} \frac{1}{(1+R)^t}$ denotes the present value of ₹1 received each period for N periods. It is defined as the present value of interest rate factor (PVIF). Using the following formula one can directly determine PVIF as

$$\text{PVIF}\ (R, M) = \frac{1 - \left[\frac{1}{(1+R)^M}\right]}{R} \tag{18.3}$$

Example: Consider a 9 percent coupon paying bond of maturity 10 years. The par value of the bond is ₹1000 and will be redeemed at maturity. If the investor's required rate is 10 percent, then compute the current value of the bond. Note that the coupon payments are made annually.

$R = 10\%$, $N = 10$ years, Coupon rate = 9%, Principal = ₹1000

$$V_0 = 90\sum_{t=1}^{10}\frac{1}{(1+0.1)^t} + \frac{1000}{(1+0.1)^{10}}$$

$$= 90[\text{PVIF (10\%, 10 years)}] + \frac{1000}{(1+0.1)^{10}} = ₹938.55$$

If the coupon will be paid semi-annually, then the value of the bond will be as follows:

$$V_0 = 45\sum_{t=1}^{20}\frac{1}{(1+0.05)^t} + \frac{1000}{(1+0.05)^{20}}$$

$$= 45[\text{PVIF (0.05\%, 20 time periods)}] + \frac{000}{(1+0.05)^{20}} = ₹937.69$$

In general if n be equal to the number of payments per year, M be equal to the maturity in years, R^A be the discount rate on an annual basis (simple annual rate) and R be equal to the period rate. The formula for bond valuation:

$$V_0 = \sum_{t=1}^{M}\frac{C^A}{\left(1+\frac{R^A}{n}\right)^t} + \frac{F}{\left(1+\frac{R^A}{n}\right)^M} \tag{18.4}$$

where,

C^A = Annual coupon
n = Numbers of payments per year
Periodic coupon = Annual coupon/n
R^A = Required periodic rate
M = Term to maturity

18.3 RELATION BETWEEN COUPON RATE, DISCOUNT RATE, VALUE OF THE BOND AND PAR VALUE

- If coupon rate (C_R) = Discount Rate (R), then the value of the bond will be equal to the face value of the bond that means the bond valued at par.
- If $C_R < R$ and $V_0 < F$, then that implies the bond is valued at discount.
- If $C_R > R$ and $V_0 > F$, then it indicates the bond is valued at premium.

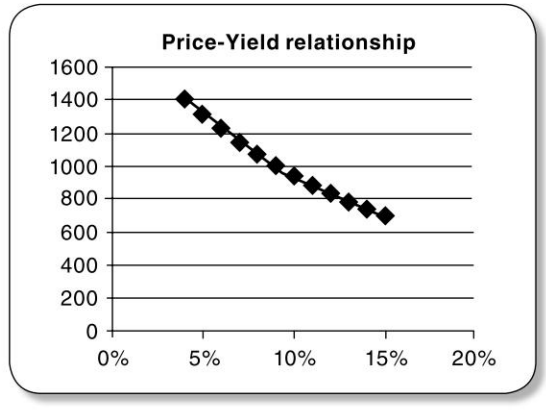
LO 3
Compare the relationship between coupon rate, discount rate, values of the bond and par value

18.3.1 Relation between Bond Value and Rate of Return

There exist an inverse relation between rate of return and value of the bond, that is, if the rate of return increases, then value of the bond decreases ($R\uparrow \Rightarrow V_0\downarrow$ or $R\downarrow \Rightarrow V_0\uparrow$). The inverse relationship between a bond's price and rate of return is represented by the negatively sloped curve, which is popularly known as *price-yield curve*. In order to have a better idea about the relationship between price and yield, let us

consider our previous example where we have taken a 9 percent coupon paying (annually) of maturity 10 years and face value ₹1000. The discount rate is 10 percent. Using this information, we determined the value of the bond as ₹938.55. Now, we will do the same exercise with different required rate such as from 4 to 15 percent by keeping all other values same. Certainly we will get different values of the bond with respect to the changes in interest rate. The diagrammatic representation of each bond value with respect to interest rate will be as follows:

Interest rate	*Value of the bond*
4%	1405.545
5%	1308.869
6%	1220.803
7%	1140.472
8%	1067.101
9%	1000
10%	938.5543
11%	882.2154
12%	830.4933
13%	782.9503
14%	739.1942
15%	698.8739



Relationship between Bond's Price Sensitivity to Interest Rate Changes and Term to Maturity

The greater the bond's term to maturity, the greater is its price sensitivity to a given change in interest rates.

Example

1. 10 year, 9 percent annual coupon bond

   $R = 10\%$, $V_0 = ₹938.55$

   $R = 9\%$, $V_0 = ₹1000$

   The changes in interest rate is –1 percent and the changes in value of the bond is 6.55 percent

2. 1 year, 9 percent annual coupon bond

   $R = 10\%$, $V_0 = ₹990.91$

   $R = 9\%$, $V_0 = ₹1000$

The changes in interest rate is –1 percent and the changes in value of the bond is 0.9 percent

Relationship between a Bond's Price Sensitivity to Interest Rate Changes and Coupon Payments

Lower a bond's coupon rate, the greater is its price sensitivity to changes in interest rates.

Example:

Maturity = 10 years, discount rate = 10 percent, principal to be redeemed at maturity = ₹1000

When the coupon rate is 10 percent,

$$V_0 = 100\sum_{t=1}^{10}\frac{1}{(1+0.1)^t} + \frac{1000}{(1+0.1)^{10}} = ₹1000$$

With other information remaining constant and the coupon rate being 2 percent, the value of the bond will be

$$V_0 = 20\sum_{t=1}^{10}\frac{1}{(1+0.1)^t} + \frac{100}{(1+0.1)^{10}} = ₹508.43$$

Let the discount rate for both the bonds be changed to 9 percent, then

$$V_0 = 100\sum_{t=1}^{10}\frac{1}{(1+0.09)^t} + \frac{100}{(1+0.09)^{10}} = ₹1064.18$$

$$\text{Proportional change} = \frac{1064.18 - 1000}{1000} = 0.064 = 6.4\%$$

$$V_0 = 20\sum_{t=1}^{10}\frac{1}{(1+0.09)^t} + \frac{1000}{(1+0.09)^{10}} = ₹550.76$$

$$\text{Proportional change} = \frac{550.76 - 508.43}{508.43} = 0.083 = 8.3\%$$

18.4 YIELD MEASURES

LO 4 Discuss various types of yield measures and yield curves

The representation of a standard yield model for annual coupon paying bond is given below:

$$V_0 = \sum_{t=1}^{M}\frac{C}{(1+R)^t} + \frac{F}{(1+R)^M} \qquad (18.5)$$

Using this model and computing different values such as coupon rate, discount rate, term to maturity as assumed in the previous example, we will try to understand the different yields.

Example: A bond having 9 percent coupon that matures in 10 years with a par value of ₹1000. The discount rate is 10 percent and the coupon is paid annually.

(i) **Nominal Yield** It represents the coupon rate of a bond. In our case, it is 9 percent.

(ii) **Current Yield** It is determined as annual coupon payment to market price of the bond. Thus, CY = 90/938.55 = 0.095 = 9.5% (Market Price is calculated above)

(iii) **Yield to Maturity** It is the rate of interest which equates the price of the bond with the present value of future cash flows. In our example, if we assume our price of the bond is ₹938.55. Then, the YTM can be determined as

$$938.55 = \sum_{t=1}^{10} \frac{90}{(1+R)^t} + \frac{1000}{(1+R)^{10}}$$

We are intended to find out the value of R, which makes both LHS and RHS equal. The ideal approach is to take different interest rates and find out the respective bond values. The interest rates which exactly get a present value of future cash flows as the value of the bond would be the promised yield to maturity. We can also approximately measure the YTM using the following formula

$$\text{YTM} = \frac{C + [(F - V_0)/M]}{(F + V_0)/2} = \frac{90 + (1000 - 938.55)/10}{(1000 + 938.55)/2} = 0.0992 = 9.92\%$$

(vi) **Yield to Call** Estimated rate of return for bond held to first call date. The above formula can also be used to calculate the yield to call of a bond. While determining the yield to call, the principal value will be replaced by call price.

(v) **Realised Yield** It is defined as the rate of return expected on a bond if the bond is sold prior to maturity. Here, along with the term to maturity, we also consider the holding period of the bond to determine the required yield. This can be computed as follows:

$$V_0 = \sum_{t=1}^{H} \frac{C}{(1\ R)^t} + \frac{V_t}{(1+R)^H} \tag{18.6}$$

Where V_t represents the future selling price of the bond and H is the number of period the bond is held before sell out. We need to price the future selling price in order to obtain the realized yield. For a bond having term to maturity as M,

$$V_f = \sum_{t=1}^{M-H} \frac{C}{(1+R)^t} + \frac{M}{(1+R)^{M-H}} \tag{18.7}$$

Considering our previous example with holding period 3 years (that means the bond will be sold after 3 years) and YTM as 10 percent the future selling price will be

$$V_f = \sum_{t=1}^{7} \frac{90}{(1+0.1)^t} + \frac{1000}{(1+0.1)^7} = ₹951.31$$

And substituting this value in the earlier equation, we can have

$$938.55 = \sum_{t=1}^{3} \frac{90}{(1+R)^t} + \frac{951.31}{(1+R)^3}$$

Hence, the realized yield will be that R which equates the RHS with LHS. Approximately, it will be as follows:

$$\text{Approx. Realized Yield} = \frac{C + [(V_t - V_0)/H]}{(V_t + V_0)/2} = \frac{90 + (951.31 - 938.55)/3}{(951.31 + 938.55)/2} = 0.0997 = 9.97\%$$

18.4.1 Yield Curve

The yield curve is a line that shows the relationship between yield to maturity and time to maturity for bonds of the same asset class and credit quality. It represents a cross section of yields for a category of bonds that are comparable in all respects except maturity. The major factors that affect the slope of the yield curve are (i) investors' expectations for future interest rate, and (ii) risk premium that investors require to hold long-term bonds. Three major theories such as (i) pure expectation theory, (ii) liquidity preference theory, and (iii) market segmentation theory explain the shape of the yield curve. The details about these theories are explained in Chapter 23.

Types of Yield Curve

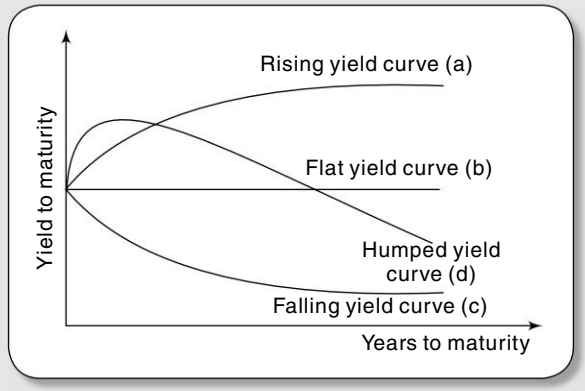


Figure 18.1 **Types of yield curves.**

A *rising yield curve* is formed when the yields on short-term bonds are low and increase consistently with longer maturities. The upward sloping or rising yield curve is common and tends to prevail when interest rates are low or modest level. The *declining yield curve* or *inverted yield curve* is formed when the yields on short-term bonds are high and yields on subsequently longer maturities decline consistently. The declining yield curve tends to occur when the interest rates are relatively high. The *flat yield curve* is formed when the yields on short-term and long-term bonds are approximately the same. This type of yield curve rarely exists in the market. The *humped yield curve* is formed when yields on intermediate-term bonds are above those on short-term bonds and the rates on long-term bonds decline to levels below those for the short term. The humped yield curve prevails when extremely high rates are expected to decline to more normal levels.

18.5 GOVERNMENT SECURITY MARKET

LO 5
Understand government security market in detail

A government security is a tradable instrument issued by the central government or the state governments. It acknowledges the government's debt obligation. Such securities are of short term (usually called treasury bills, with original maturities of less than 1 year, already discussed in the Chapter 16) or long term

(usually called government bonds or dated securities with original maturity of 1 year or more). In India, the central government issues both, treasury bills and bonds or dated securities while the state governments issue only bonds or dated securities, which are called the state development loans (SDLs). Government securities (G-Secs) carry practically no risk of default and, hence, are called risk-free gilt-edged instruments. Dated government securities are longer term securities and carry a fixed or floating coupon (interest rate) paid on the face value, payable at fixed time periods (usually half-yearly). The tenor of dated securities can be up to 30 years. The Public Debt Office (PDO) of the RBI acts as the registry/depository of government securities and deals with the issue, interest payment and repayment of principal at maturity. Most of the dated securities are fixed coupon securities. This chapter deals with mainly the long-term dated government securities, SDLs and long-term corporate bonds.

18.5.1 Importance of Government Securities Market (GSM)

The government securities are the most dominant category of debt markets and form a major part of the market in terms of outstanding issues, market capitalization and trading value. It sets a benchmark for the rest of the market. It not only provides resources to the government for meeting its short-term and long-term needs but also acts as the benchmark for pricing corporate securities of varying maturities. Moreover, a deep, broad and liquid government securities market is essential for the conduct and effectiveness of open market operations (OMOs). In the UK also, as in India, the market in government securities is much larger than that in industrial securities. In the United States, however, it is the other way round.

Government securities are a unique and important financial instrument in the financial markets of any country. Unlike other instruments (except TBs), it is also held by the central bank (CB) of the country, and the working of two of the major techniques of monetary control of the central bank—open market operations and statutory liquidity ratio—are closely connected with the dynamics of the market for this instrument. Again, unlike other instruments, its issues are helpful in implementing the fiscal policy of the government. Financial institutions such as commercial banks are required to maintain their secondary reserve requirements in the form of these securities. It is also easier for the holders to obtain loans against the collateral of these securities from the RBI and other institutions. As the RBI can issue currency notes against the backing, apart from gold and foreign exchange, of central government bonds, they constitute the ultimate source of liquidity in the economy. As government security is a claim on the government, it is an absolutely secure financial instrument which guarantees the certainty of both income and capital. It is, therefore, called a 'gilt-edged' security or stock. It is true that many alternative instruments such as industrial debentures and stocks of local authorities are also quite secure, but the central government securities are the safest of all claims. They are free of default risk or credit risk, which, *ceteris paribus*, leads to a reduction in market risk, and an increase in liquidity in their case. The assets which have a relatively low default risk have a relatively narrow dispersion of expected prices, and, therefore, operationally have a greater liquidity. Government securities provide certainty of capital value not only at maturity but also prior to maturity, and as such, they are an ideal financial instrument for diversification of investment portfolio.

Overall the GSM has a three-fold importance. First, from the viewpoint of the government, the development of a deep and liquid GSM facilitates public borrowings at reasonable cost and the avoidance of automatic monetisation of government deficit. The broad, well-functioning, well-developed GSM provides flexibility to the authorities in their task of debt management. Second, GSM helps pricing of various debt instruments through creation of a benchmark, and enables a proper evaluation of risk. Third, it facilitates the development

of indirect instruments of monetary policy. Activity in the government securities market can affect overall investment in the economy in two ways. First, it may adversely affect private investment by directly competing for the limited resources. An increase in the supply of government securities in the face of high budget deficits would drive down their prices, leading to a substitution of private bonds with government securities, particularly, by investors whose demand is driven by trading and portfolio management requirements. This phenomenon is often described as 'crowding out'. Second, the government securities market can also have a positive influence on private investment by enabling the development of private bond market in two ways: (i) by putting in place a basic financial infrastructure, including laws, institutions, products, services, repo and derivatives markets, and (ii) by playing a role as an informational benchmark. A single private issuer of securities would never be of sufficient size to generate a complete yield curve and his securities would not be riskless because only the government has the power to print domestic currency (Herring and Chatusripitak, 2000). Thus, the yield curve of government securities serves as a public good in financial markets.

It acts as a channel of integration of various segments of the financial market. Government securities are used by dealers as a major hedging tool for interest rate risk and as underlying assets and collateral for related markets, such as repo, futures and options (BIS, 1999). From the perspective of an issuer, that is, the government, a deep and liquid government securities market facilitates its borrowings from the market at reasonable cost. A greater ability of the government to raise resources from the market at market-determined rates of interest allows it to refrain from monetisation of the deficit through central bank funding. For the central bank, a developed government securities market allows greater application of indirect or market-based instruments of monetary policy such as open market (including repo) operations.

The government securities market, which is often the predominant segment of the overall debt market in many economies, plays a crucial role in the monetary policy transmission mechanism. Thus, irrespective of whether the central bank acts as manager of public debt or not, there are three main channels through which government debt structure might influence monetary conditions, *viz.* quantity of debt, composition of debt and ownership of debt. The absolute size of government borrowings, especially when the financial markets are underdeveloped, often raises concerns about public debt management as there could be recourse to short-term financing from the central bank leading to monetary expansion. However, as the public debt/GDP ratio declines and government securities market develops with introduction of new instruments (such as index-linked gilts), new issuing techniques (such as auctions) and improved market infrastructure, practical concerns about debt management impinging on monetary control get reduced.

The composition of debt in terms of maturity pattern may also influence the conduct of monetary policy. One view is that monetary authorities may keep interest rates low when there is large short-term debt so as to reduce the rollover cost. A contrary view is that they may react more aggressively to inflationary shocks when maturity structure of debt is short so as to minimise the future rollover cost resulting from higher expected inflation and higher future nominal interest rates. The government's decision to issue short versus long maturity debt or conventional versus index-linked debt may affect real yields, depending upon the substitutability of the instruments, thereby affecting the interest sensitive sectors of the economy.

The central policy concern about the ownership of public debt is related to the composition in terms of holding by banks and non-banks. Several empirical studies, using data mainly from the United States, found that increased debt issuances could lead to increase in bank holdings of debt. New issues of debt taken up by banks act as a substitute for lending to the private sector and, therefore, reduce the supply of bank credit to it. During monetary tightening, however, banks would extend loans to the private sector by running down

their holdings of government debt. Thus, banks' holding of public debt acts as a buffer. The experience in the United Kingdom was, however, contrary as the available evidence found that debt sales to banks had only a small impact on either money supply growth or bank lending.

The working of money market has relevance in the development of GSM because the former provides liquidity to the latter. The existence of well-developed repo market also helps the growth of GSM because landing and borrowing in a safe environment can be fostered through repos. Among various methods of issuing government securities such as auctions, tap sales, syndication, book building, and so on, the auction method has been the most favoured method in India. The auctions are based on yield, price or discount, with or without some underwriting commitment by PDs. Both discriminatory and uniform price auction techniques are used, but the former is more dominant. Further, while multiple price auctions formats is predominantly used for dated securities, uniform price auction method is used for issuing 91-day TBs. Since the RBI conducts the auction, its participation in primary auctions is ruled out. It now takes private placements rarely. The auction-based system of issues and the system of borrowing at market-related interest rates have helped to increase the amounts borrowed from the market, to modulate better the maturity structure of government borrowings, and to reduce development on the RBI.

18.5.2 Principles of a Deep and Liquid GSM

After the financial crises in the late 1990s in many economies, a consensus emerged on the need to develop deep and liquid financial markets, especially government securities markets. Studies suggested that the size is a key determinant of liquidity of the government securities market (McCauley and Remolona, 2000). A critical issue in this regard is trading liquidity, that is, the ability of the market to execute transactions at short notice, low cost and with little impact on price (Lagana *et al.*, 2006). The extent of liquidity in a market is usually captured by any or all of the four indicators, *viz.*, width (width of the bid-ask spread), depth (the ability to carry out large trading without significant changes in price levels), immediacy (the ability to carry out large trading promptly without significant changes in price levels) and resilience (the ability of prices to quickly return to normal) (Harris, 1990). The Bank for International Settlements (BIS) identified four interrelated general principles for designing deep and liquid markets.

A five-pronged policy strategy can be pursued to promote liquidity in the government securities market (BIS, 1999). First, there is a need to maintain a competitive market structure in the government securities market to facilitate efficient price discovery. A government security, like any financial instrument, can be traded through a wide variety of mechanisms such as over-the-counter (OTC) markets, organised exchanges and other platforms which cannot be placed in either of these categories. A fundamental strategy is to infuse competition among dealers which would narrow bid-ask spreads and increase liquidity of the market. In the case of exchanges, even when their number is limited, dynamic competition between the leading exchange and other exchanges, and between the OTC market and organised exchanges contribute to market liquidity. Thus, it is necessary to maintain a 'contestable market' where the dominant market participants can be challenged by new entrants if monopolistic or oligopolistic practices develop. Second, the government securities market needs to have a low level of fragmentation offering instruments which have high degree of substitutability. Market liquidity tends to be enhanced when instruments can be substituted one for another since the market for each of them becomes less fragmented. A high degree of substitutability enhances trading supply of securities which facilitates in meeting the transaction demand. However, there is also a need to have some degree of heterogeneity in instruments for catering to specific investor needs. The trade-off between

homogeneous product of large volume and some heterogeneity can be resolved by having a system of issuing government bonds at several 'key maturities' from the short end to the long end of the yield curve.

Third, liquidity of the government securities market can be improved by lowering transaction costs, which include taxes, cost of sustaining necessary infrastructure and compensation for liquidity provision services. Higher transaction costs widen the gap between the effective price received by sellers of the instrument and that paid by buyers, thereby making it difficult to match sell and buy orders. This leads to low market liquidity. Some transaction costs, however, are inevitable such as those associated with ensuring sound payment and settlement infrastructure and improving overall robustness of the market. Thus, transaction costs need to be minimised as long as this does not reduce the security of the market in question.

Fourth, there is a need to ensure a sound, robust and safe market infrastructure comprising (i) payment and settlement systems; (ii) the regulatory and supervisory framework; and (iii) market monitoring and surveillance. This increases the resilience of the government securities market against external shocks and contributes to continuous price discovery, thereby enhancing market liquidity. Finally, there is a need to promote heterogeneity of market participation in terms of transaction needs, risk assessments and investment horizons to promote liquidity in the government securities market. Furthermore, apart from varied domestic investor base, there is also a need to permit foreign participants. Non-residents may have risk appetite different from that of residents, which would prompt them to react differently to new information. However, liberalisation to encourage foreign participation has to be calibrated appropriately after paying due attention to sequential development of domestic markets.

18.5.3 GSM in the Pre-Liberalisation Period in India

Prior to 1991, the government securities market was not developed because of inefficient market practices and lack of proper institutional infrastructure. Subscriptions to the government securities emanated mainly from the Reserve Bank as it monetized the budget deficits of the government and banks as part of fulfilment of their statutory obligations. The main factor that inhibited the development of the sovereign yield curve in India in the pre-reform period was the prevalence of artificially low administrative coupon rates on these securities which were out of alignment with other interest rates in the economy. The coupon rates remained virtually unchanged up to 1979–1980. Thereafter, although coupon rates were revised upwards, especially for the securities of longer tenor, the yield of a 30-year government bond remained lower than the maximum bank deposit rate. The Reserve Bank, despite being the debt manager for the government, did not have control over volume, maturity and term structure of interest rates in the government securities market. This was mainly on account of absence of any limit to the automatic monetization of budget deficits of the central government. Consequently, the market remained narrow with captive participation from institutions as dictated by statutory requirements. Apart from the Reserve Bank holding securities on its own account, the major investors were banks, insurance companies, provident funds and other trust funds. The Reserve Bank did not have special representatives in the market and had to make use of services of stock brokers. The non-remunerative yields and captive nature of the government securities market impeded secondary market activity. The maturity structure of the government securities remained highly skewed in favour of longer term of more than 15 years[1].

[1]Narendra Jadav, *Development of Securities Market*—The Indian Experience.

In the pre-liberalized period the government securities were normally issued in the denomination of ₹100 or ₹1000. The face value which used to be ₹100 till the middle of the 1980s was raised to ₹1000 after that. The rate of interest on these securities is relatively lower because of their being liquid and safe. The interest on government securities was payable half-yearly. Interest in respect of central and state government securities, along with income in the form of interest or dividends on other approved investments, is exempt from income tax subject to a limit. Although it is true that government securities are liquid and safe, securities of different authorities differ in respect of the extent to which they possess these attributes. The marketability of securities of state governments and semi-governments is relatively restricted; therefore, they are less liquid than central government securities.

There are three forms of central and state government securities: (a) inscribed stock or stock certificate (SC), (b) promissory note (PN), and (c) bearer bond. While these days, bearer bonds are not usually being issued in India, stock certificates are not very popular with investors. Consequently, most government securities were in the form of promissory notes. Promissory notes of any loan can be converted into stock certificates of any other loan or *vice versa*. In order to popularise the holding of stock certificates, governments specially advertise the following advantages to distinguish them from promissory notes: (a) they are safer than PNs as the name of the holder is registered in the books of the Public Debt Office (PDO); (b) the stock certificate relating to the application tendered at any branch of the SBI or its subsidiary is sent to the applicant directly by registered post by the PDO; (c) the half-yearly interest is remitted to the holder directly by an interest warrant drawn at par on any treasury or SBI as stipulated by the holder or is remitted by money order (MO), if so desired, and (d) the holder can sell it by signing the transfer form on the reverse of the certificate. On the other hand, interest on PN is payable only on presentation of the note at the office in which it is enfaced. The major reason why SC is not popular in spite of these advantages is its lack of quick transferability and negotiability. It is not transferable by endorsement; the procedure for affecting its transfer is much more complex. In the case of PN, the title is transferable by endorsement and delivery, and it is a negotiable financial instrument. This suggests that investors who need to borrow often against the collateral of government securities would prefer PN to SC. In a relative sense, if SCs are often bought by investors such as LIC, PF, and so on, PNs are in demand by banks.

Government securities are issued through the PDO of the RBI. The method of selling them differs from that of selling TBs. Instead of selling them through auction, the issues are notified a few days before they become open for subscription and they are kept open for subscription for 2/3 days, but, they may be closed for subscription earlier if the subscriptions approximate the amount of issue. As government securities are deemed to be listed on stock exchanges, there are no separate listing requirements for them. As primary issues are notified to the public through the government notification and the press communiqué, there is no issue of prospectus or vetting of prospectus in their case; the SEBI normally routinely grants 'no objection' to the primary issues of these securities. The budgeted amount of issues in a given year is raised in a number of tranches in that year. This is obviously to avoid flooding of the market with securities at a given time. However, as the issues are mostly bought by institutional investors, there can be a small number of large issues. After the announcement of new issue, the RBI suspends the sale of existing loans till the closure of subscriptions to new loans. The government reserves the right to retain subscriptions up to a specified percentage, say 10 percent in excess of notified amounts. Applications for loans are received at the offices of the RBI and at the branches of the SBI. In the case of issues of state government securities, over-subscription to loans of one government is transferable to the other government whose loan is still open for subscription, at the option

of the subscriber. Due to the seasonal character of the money market, issues are mostly concentrated during slack seasons. Because of the size of debt and the continuous need for raising fresh capital, the effective issue and redemption on single dates as in the case of industrial securities has become impossible. The old method of issue of blocks of securities and their redemption on single maturity dates continues in form, but, when the issue of bonds is announced, a part is taken over by the RBI which sells the amount gradually through the stock exchanges in the ensuing period. Similarly, 'grooming' and 'switching' implies that the RBI buys the bonds gradually through the stock exchange until usually; only a small proportion remains to be paid off on the formal maturity date. Thus, in practice, the process of issue and redemption has become continuous. This also means that securities are available on 'tap', and the securities thus obtained may be called 'tap stocks'.

18.5.4 Existing Structure and Organization of Dated GSM in India

Participants in Dated GSM

Major players in the government securities market include Reserve Bank of India, commercial banks and primary dealers (PDs) besides institutional investors such as insurance companies. Primary dealers play an important role in market making of securities. Other participants include co-operative banks, regional rural banks, mutual funds, provident and pension funds. Foreign institutional investors (FIIs) are allowed to participate in the government securities market within the quantitative limits prescribed from time to time. Corporates also buy/sell the government securities to manage their overall portfolio risk. The investors in this market can be classified into different segments such as (i) wholesale market which comprises the players such as banks, financial institutions, insurance companies, primary dealers and mutual funds, (ii) middle segment comprising corporate, provident funds, non-banking financial companies and co-operative banks, and (iii) retail segment consisting of individuals and non-institutional investors.

The RBI occupies a pivotal position in this market. It is continuously in the market selling government securities and buying them mostly in switch operations and rarely for cash. Switch operations are useful to banks and financial institutions to improve their yields on their investments in government securities. Sometimes, there are triangular switch transactions in which one investor's sale or purchase is matched by the purchase or sale transactions of another investor, the RBI being the middle party. The RBI fixes an annual quota, based on the size of the bank, for switch transactions of each bank from time to time with a view to prevent banks from exclusive sales of low-yielding securities to the RBI. It maintains separate lists of securities for purchase and sale transactions. Different scrips are included in the two lists having regard to the stock of securities and dates of their maturities. One of the unique features of trading in this market is 'voucher trading' or 'voucher benefit'. The banks and financial institutions whose earnings are taxed, purchase the securities around the interest due date and unload them in the market after availing themselves of the voucher for the full year. This practice has activated trading in these securities, particularly around interest due date.

On line with the similar institutions in the United States, UK, Canada, France, and Australia, the system of primary dealers (PDs) was created in India in 1994 and it has become operational since then. The objectives of PDs are as follows: (a) to strengthen the infrastructure in the GSM in order to make it vibrant, liquid and broad-based, (b) to ensure development of underwriting and market-making capabilities for government securities outside the RBI so that the latter is able to shed these functions gradually, (c) to improve secondary market trading system which would contribute to price discovery, enhance liquidity and turnover and encourage voluntary holding of government securities among a wider investor base, (d) to make PDs an effective conduit for conducting OMOs, (e) to help placement of government securities in primary issues

by committed participation in auctions, (f) to provide active secondary market by giving two-way quotes, and (g) to provide signals to the central bank for market intervention. The PDs have the following rights/ privileges: (a) To maintain clearing balances with the central bank (CB), (b) to borrow bonds/funds from the CB, (c) to operate switches with the CB, (d) to participate in securities auctions, and (e) to access OMOs on exclusive basis.

Forms of Dated Government Securities

Government securities may be held by investors either as physical stock or in dematerialized form. From 20 May, 2002, it is mandatory for all the RBI regulated entities to hold and transact in government securities only in dematerialized (SGL) form. In the physical form, government securities are held in the form of stock certificates. A stock certificate is registered in the books of PDO. Ownership in stock certificates cannot be transferred by way of endorsement and delivery. They are transferred by executing a transfer form as the ownership and transfer details are recorded in the books of PDO. The transfer of a stock certificate is final and valid only when the same is registered in the books of PDO. Holding government securities in the dematerialized or scripless form is the safest and the most convenient alternative as it eliminates the problems relating to custody, *viz.*, loss of security. Besides, transfers and servicing are electronic and hassle free. The holders can maintain their securities in dematerialsed form in either of the two ways: (i) *SGL Account:* Reserve Bank of India offers Subsidiary General Ledger Account (SGL) facility to select entities who can maintain their securities in SGL accounts maintained with the Public Debt Offices, of the Reserve Bank of India. (ii) *Gilt Account:* As the eligibility to open and maintain an SGL account with the RBI is restricted, an investor has the option of opening a Gilt Account with a bank or a primary dealer which is eligible to open a Constituents' Subsidiary General Ledger Account (CSGL) with the RBI. Under this arrangement, the bank or the primary dealer would maintain the holdings of its constituents in a CSGL account (which is also known as SGL II account) with the RBI as a custodian on behalf of the Gilt Account holders (GAH). The servicing of securities held in the Gilt Accounts is done electronically, facilitating hassle free trading and maintenance of the securities. Receipt of maturity proceeds and periodic interest is also faster as the proceeds are credited to the current account of the custodian bank/primary dealer (PD) with the RBI and the custodian (CSGL account holder) immediately passes on the credit to the Gilt Account holders (GAH).

Primary Market Issuance of Dated Government Securities

During the period of liberalization particularly after 1992 in the primary GSM, the dated securities are issued and priced through the auction process for a better price discovery. As discussed in Chapter 16 there are two types of auctions that is yield-based auction and price-based auction. For better understanding of these two types of auction process, in this section we have explained the process through some hypothetical examples as follows:

Yield-based Auction of a New Security:

- Maturity Date: 6 August 2024
- Coupon: It is determined in the auction (8.22 percent as shown in the following illustration)
- Auction date: 5 August 2014
- Auction settlement date: 6 August 2014*
- Notified Amount: ₹1000 crore

*Settlement is done on 6 August, 2014, under $T + 1$ cycle. If the settlement date is a holiday under $T + 1$ cycle, then the next working will be considered as settlement date.

Details of bids received in the increasing order of bid yields

Bid No.	*Bid yield*	*Amount of bid (₹ Crore)*	*Cummulative amount (₹ Crore)*	*Price* with coupon as 8.22%*
1	8.19%	300	300	100.19
2	8.20%	200	500	100.14
3	8.20%	250	750	100.13
4	8.21%	150	900	100.09
5	8.22%	100	1000	100.00
6	8.22%	100	1100	100.00
7	8.23%	150	1250	99.93
8	8.24%	100	1350	99.87

The issuer would get the notified amount by accepting bids up to 5. Since the bid number 6 also is at the same yield, bid numbers 5 and 6 would get allotment *pro-rata* so that the notified amount is not exceeded. In the above case each would get ₹50 crore. Bid numbers 7 and 8 are rejected as the yields are higher than the cut-off yield.

Price-based auction of an existing security 8.24% GS 2024

- Maturity Date: 22 August, 2024
- Coupon: 8.24%
- Auction date: 5 August, 2014
- Auction settlement date: 6 August, 2014*
- Notified Amount: ₹1000 crore

*Settlement is done on 6 August, 2014 under $T + 1$ cycle. If the settlement date is a holiday under $T + 1$ cycle, then the next working will be considered as settlement date.

Details of bids received in the decreasing order of bid price

Bid no.	*Price of bid*	*Amount of bid (₹ Crore)*	*Implicit yield*	*Cumulative amount*
1	100.31	300	8.1912%	300
2	100.26	200	8.1987%	500
3	100.25	250	8.2002%	750
4	100.21	150	8.2062%	900
5	100.20	100	8.2077%	1000
6	100.20	100	8.2077%	1100
7	100.16	150	8.2136%	1250
8	100.15	100	8.2151%	1350

The issuer would get the notified amount by accepting bids up to 5. Since the bid number 6 also is at the same yield, bid numbers 5 and 6 would get allotment in proportion so that the notified amount is not exceeded. In the above case each would get ₹50 crore. Bid numbers 7 and 8 are rejected as the price quoted is less than the cut-off price.

Depending upon the method of allocation to successful bidders, auction could be classified as *uniform price*-based and *multiple price*-based. In a uniform price auction, all the successful bidders are required to pay for the allotted quantity of securities at the same rate, that is, at the auction cut-off rate, irrespective of the rate quoted by them. On the other hand, in a multiple price auction, the successful bidders are required to pay for the allotted quantity of securities at the respective price/yield at which they have bid. In the example under (ii) above, if the auction was uniform price-based, all bidders would get allotment at the cut-off price, that is, ₹100.20. On the other hand, if the auction was multiple price-based, each bidder would get the allotment at the price he/she has bid, that is, bidder 1 at ₹100.31, bidder 2 at ₹100.26 and so on. An investor may bid in an auction under either as a *competitive* or *non-competitive* bidder. The detailed discussion on these two categories of bidding has been provided in *Chapter 16*. In every auction of dated securities, a maximum of 5 percent of the notified amount is reserved for non-competitive bids. The minimum amount and the maximum amount for a single bid is ₹10,000 and ₹2 crore, respectively, in the case of an auction of dated securities. A bank or a primary dealer can charge an investor up to maximum of 6 paise per ₹100 of application money as commission for rendering their services. In case the total applications received for non-competitive bids exceed the ceiling of 5 percent of the notified amount of the auction for dated securities, the bidders are allotted securities on a *pro-rata* basis.

Earlier until 2005–2006, RBI used to adopt sale route instead of auctions where the coupon rate and maturity are pre-determined and the securities are issued at par. In the recent years also at the time of tight liquidity position or when investors expect very high yields, the RBI wants to keep the borrowing costs in check, so that it may not be possible for the RBI to hold an auction; therefore, the RBI places the securities with itself and funds the government. These securities are later sold in the market through its sale window at an appropriate time.

Trading of Dated Government Securities in Secondary Market

There is an active secondary market where the government securities are traded and reported. The securities can be traded in the secondary market either through (i) over the counter (OTC), or (ii) through the negotiated dealing system (NDS) and (iii) stock exchanges.

(i) **Over the Counter (OTC)/Telephone Market:** In this market, a participant, who wants to buy or sell a government security, may contact a bank/primary dealer/financial institution either directly or through a broker registered with SEBI and negotiate for a certain amount of a particular security at a certain price. Such negotiations are usually done on telephone and a deal may be struck if both counterparties agree on the amount and rate. In the case of a buyer, such as an urban co-operative bank wishing to buy or sell a security, the bank's dealer (who is authorised by the bank to undertake transactions in government securities) may get in touch with other market participants over telephone and obtain quotes. Should a deal be struck, the bank should record the details of the trade in a deal slip and send a trade confirmation to the counterparty. The dealer must exercise due diligence with regard to the price quoted by verifying with available sources.

(ii) **Negotiated Dealing System:** The negotiated dealing system (NDS) for electronic dealing and reporting of transactions in government securities was introduced in February 2002. It facilitates the members to submit electronically, bids or applications for primary issuance of government securities when auctions are conducted. NDS also provides an interface to the securities settlement system (SSS) of the Public Debt Office, RBI, Mumbai thereby facilitating settlement of transactions in government

securities (both outright and repos) conducted in the secondary market. Membership to the NDS is restricted to members holding SGL and/or Current Account with the RBI, Mumbai. In August 2005, RBI introduced an anonymous screen-based order-matching module on NDS, called NDS-OM. This is an order-driven electronic system, where the participants can trade anonymously by placing their orders on the system or accepting the orders already placed by other participants. NDS-OM is operated by the Clearing Corporation of India Ltd. (CCIL) on behalf of the RBI. Direct access to the NDS-OM system is currently available only to select financial institutions such as commercial banks, primary dealers, insurance companies, mutual funds and so on. Other participants can access this system through their custodians, that is, with whom they maintain Gilt Accounts. The custodians place the orders on behalf of their customers, such as the urban co-operative banks. The advantages of NDS-OM are price transparency and better price discovery. Gilt Account holders have been given indirect access to NDS through custodian institutions. A member (who has the direct access) can report on the NDS, the transaction of a Gilt Account holder in government securities. Similarly, Gilt Account holders have also been given indirect access to NDS-OM through the custodians. However, currently two Gilt Account holders of the same custodian are not permitted to undertake repo transactions between themselves.

(iii) **Stock Exchanges:** With a view to encouraging wider participation of all classes of investors across the country (including retail investors) in government securities, the Government, RBI and SEBI have introduced trading in government securities for retail investors through the stock exchanges such as NSE and BSE. *The Wholesale Debt Market* (WDM) segment of the NSE commenced operations on 30 June, 1994. This provided the first formal screen-based trading facility for the debt market in the country. This segment provides trading facilities for a variety of debt instruments including government securities, treasury bills and bonds issued by public sector undertakings/corporates/banks such as floating rate bonds, zero coupon bonds, commercial papers, certificate of deposits, corporate debentures, state government loans, statutory liquidity ratio (SLR) and non-SLR bonds issued by financial institutions, units of mutual funds and securitized debt by banks, financial institutions, corporate bodies, trusts and others. Large investors and a high average trade value characterize this segment. Till recently, the market was purely an informal market with most of the trades directly negotiated and struck between various participants. The commencement of this segment by NSE has brought about transparency and efficiency to the debt market.

The NSE provides a facility for screen-based trading with order-matching facility. The members are connected from their respective offices at dispersed locations to the main system at the NSE premises through a high-speed, efficient satellite tele-communication network. The trading system is an order-driven, automated order-matching system, which does not reveal the identity of parties to an order or a trade. This helps orders whether large or small to be placed without the members being disadvantaged by disclosure of their identity. The trading system operates on a price time priority. Orders are matched automatically by the computer keeping the system transparent, objective and fair. Where an order does not find a match it remains in the system and is displayed to the whole market, until a fresh order which matches, comes in or the earlier order is cancelled or modified. The trading system provides tremendous flexibility to the users in terms of the type of orders that can be placed on the system. Several time-related, price-related or volume-related conditions can easily be placed on an order. The trading system also provides complete on-line market information through various inquiry facilities. Detailed information on the total order depth in a security, the best buys and sells available in the market, the quantity traded in that security, the high, the low and last-traded prices

are available through the various market screens at all points of time. The wholesale debt market segment of BSE commenced its operations on 15 June, 2001. All existing cash market members of the exchange who fulfil the net worth criteria of ₹30 lakh are eligible for wholesale debt market (WDM) membership.

Reporting of Government Securities Transactions

Transactions undertaken between market participants in the OTC/telephone market are expected to be reported on the NDS platform within 15 minutes after the deal is put through over telephone. All OTC trades are required to be mandatorily reported on the secondary market module of the NDS for settlement. Reporting on NDS is a four-stage process wherein the seller of the security has to initiate the reporting followed by confirmation by the buyer. This is further followed by issue of confirmation by the seller's back office on the system and reporting is complete with the last stage wherein the buyer's back office confirms the deal. The system architecture incorporates maker-checker model to pre-empt individual mistakes as well as misdemeanour.

Reporting on behalf of entities maintaining Gilt Accounts with the custodians is done by the respective custodians in the same manner as they do in case of their own trades, that is, proprietary trades. The securities leg of these trades settle in the CSGL account of the custodian. Once the reporting is complete, the NDS system accepts the trade. Information on all such successfully reported trades flow to the clearing house, that is, the CCIL. In the case of NDS-OM, participants place orders (price and quantity) on the system. Participants can modify/cancel their orders. Order could be a bid for purchase or offer for sale of securities. The system, in turn, will match the orders based on price and time priority. That is, it matches bids and offers of the same prices with time priority. The NDS-OM system has separate screen for the central government, state government and treasury bill trading. In addition, there is a screen for odd lot trading for facilitating trading by small participants in smaller lots of less than ₹5 crore (i.e. the standard market lot). The NDS-OM platform is anonymous platform wherein the participants will not know the counterparty to the trade. Once an order is matched, the deal ticket gets generated automatically and the trade details flow to the CCIL. Due to anonymity offered by the system, the pricing is not influenced by the participants' size and standing.

Settlement of the Government Securities

In the *primary market*, once the allotment process in the primary auction is finalized, the successful participants are advised of the consideration amounts that they need to pay to the government on settlement day. The settlement cycle for dated security auction is $T + 1$, whereas for that of treasury bill auction is $T + 2$. On the settlement date, the fund accounts of the participants are debited by their respective consideration amounts and their securities accounts (SGL accounts) are credited with the amount of securities that they were allotted. In case of retail participants/individuals who do not maintain accounts with the RBI, they can tender a cheque, the proceeds of which will be collected through clearing process after which securities are issued to them.

Secondary Market The transactions relating to government securities are settled through the member's securities/current accounts maintained with the RBI, with delivery of securities and payment of funds being done on a net basis. All trades in government securities are reported to RBI-SGL through the negotiated dealing system (NDS) of RBI. The Clearing Corporation of India (CCIL) guarantees settlement of trades on the settlement date by becoming a central counter-party to every trade through the process of novation, that is, it becomes seller to the buyer and buyer to the seller. All outright secondary market transactions

in government securities are settled on $T + 1$ basis. However, in case of repo transactions in government securities, the market participants will have the choice of settling the first leg on either $T + 0$ basis or $T + 1$ basis as per their requirement.[2] Settlement is on a rolling basis, that is, there is no account period settlement. Each order has a unique settlement date specified upfront at the time of order entry and used as a matching parameter. It is mandatory for trades to be settled on the predefined settlement date. All the transactions are settled through delivery *versus* payment (D*v*P) system. D*v*P is the mode of settlement of securities wherein the transfer of securities and funds happen simultaneously. This ensures that unless the funds are paid, the securities are not delivered and *vice versa*. D*v*P settlement eliminates the settlement risk in transactions. There are three types of D*v*P settlements, *viz.*, D*v*P I, II and III which are explained as follows:

(i) *DvP I*: The securities and funds legs of the transactions are settled on a gross basis, that is, the settlements occur transaction by transaction without netting the payables and receivables of the participant.

(ii) *DvP II*: In this method, the securities are settled on gross basis whereas the funds are settled on a net basis, that is, the funds payable and receivable of all transactions of a party are netted to arrive at the final payable or receivable position which is settled.

(iii) *DvP III*: In this method, both the securities and the funds legs are settled on a net basis and only the final net position of all transactions undertaken by a participant is settled.

18.5.5 Major Policy Measures Taken in the Period of Liberalization

The development of the dated government securities market in India in the pre-reform period was mainly constrained by captive investors (predominantly banks and insurance companies) and administered coupon rates on government securities at artificially low levels. As a result, the secondary market for government securities was almost non-existent. In this context, the reform process for the government securities market focused on the following major areas:

1. A need was felt to phase out the administered interest rate system and bring in market discovery of prices of government securities so as to ensure broad-based participation. Accordingly, auction-based system for issuances of government dated securities was initiated from June 1992.
2. An appropriate network of intermediaries [Discount and Finance House of India (DFHI) in 1988 (currently known as SBI-DFHI), Securities Trading Corporation of India (STCI) in 1994 and primary dealers (PDs) in 1995] was created with the objective of strengthening securities market infrastructure.
3. The statutory liquidity ratio (SLR), the proportion of net demand and time liabilities that a bank had to keep as investments in government and other approved securities, was brought down from 38.5 percent to its minimum value of 23 percent.
4. Foreign institutional investors were permitted in the gilt market from July 1997. The retailing of government securities was promoted by allowing trading of government securities in the stock exchanges through anonymous screen-based order-driven basis for providing countrywide access.
5. The Reserve Bank shifted from passive to active management of public debt as the practice of automatic monetization of the central government deficit through *ad hoc* treasury bills was phased out and replaced by a scheme of ways and means advances (WMA).

[2]RBI, *Government Securities Market in India—A Primer*, www.rbi.org.in scripts/FAQView.aspx?Id=79#16.

6. Attempts were made to introduce new instruments so as to suit the diverse investor requirements, such as, zero coupon bonds (January 1994), floating rate bonds (September 1995), capital-indexed bonds (December 1997) and bonds with call and put options (July 2002).
7. Introduction of **STRIP (Separate Trading of Registered Interest and Principal of Securities)**. Steps are being taken to introduce new types of instruments, such as, STRIPS. Accordingly, guidelines for stripping and reconstitution of government securities have been issued. STRIPS are instruments wherein each cash flow of the fixed coupon security is converted into a separate tradable zero coupon bond and traded. For example, when ₹100 of the 8.24 percent GS2018 is stripped, each cash flow of coupon (₹4.12 each half year) will become coupon STRIP and the principal payment (₹100 at maturity) will become a principal STRIP. These cash flows are traded separately as independent securities in the secondary market. STRIPS in government securities will ensure availability of sovereign zero coupon bonds, which will facilitate the development of a market-determined zero coupon yield curve (ZCYC). STRIPS will also provide institutional investors with an additional instrument for their asset-liability management. Further, as STRIPS have zero reinvestment risk, being zero coupon bonds, they can be attractive to retail/non-institutional investors. The process of stripping/reconstitution of government securities is carried out at RBI, Public Debt Office (PDO) in the PDO-NDS (negotiated dealing system) at the option of the holder at any time from the date of issuance of a government security till its maturity. All dated government securities, other than floating rate bonds, having coupon payment dates on 2nd January and 2nd July, irrespective of the year of maturity are eligible for stripping/reconstitution. Eligible government securities held in the subsidiary general ledger (SGL)/constituent subsidiary general ledger (CSGL) accounts maintained at the PDO, RBI, Mumbai. Physical securities shall not be eligible for stripping/reconstitution. Minimum amount of securities that needs to be submitted for stripping/reconstitution will be ₹1 crore (face value) and multiples thereof.
8. Efforts have been made to calibrate technological upgradation of trading, payment and settlement structure in the gilt market in a phased manner so as to make it safer, transparent and efficient. Settlement risk has been lowered with the introduction of delivery *versus* payment (D*v*P) system in July 1995, which ensures settlement by synchronising the transfer of securities with cash payment. The D*v*P developed into the third stage from April 2004 where settlement of both securities and funds are on a net basis.
9. The Clearing Corporation of India Limited (CCIL) commenced operations from 15 February, 2002 in clearing and settlement in government securities. Backed by a settlement guarantee fund (SGF), CCIL acts as central counterparty and provides guaranteed settlement.
10. The negotiated dealing system (NDS), which was also set up simultaneously, provides on-line electronic bidding at the auctions and permits 'paperless' settlement of transactions in government securities with electronic connectivity with CCIL and D*v*P system.
11. Measures were introduced from May 2002 for holding of government securities in dematerialised mode instead of physical fashion, which had carried the potential risks of irregularities through non-delivery. Screen-based order-driven trading of gilts was also allowed in stock exchanges in January 2003. The operationalization of real-time gross settlement (RTGS) was undertaken from March 2004 for continuous processing and settlement transfer of funds so as to minimise payment risk.

12. Since May 2005, the settlement of all outright secondary market transactions in government securities has been carried out on $T + 1$ basis. The RBI permitted sale of government securities allotted to successful bidder in primary market on the day of allotment between CSGL (constituents subsidiary general ledger) accounts holder.
13. Banks and PDs were permitted to undertake intra-day short sale in central government dated securities subject to the same been covered by outright purchase in secondary market within the same trading day since 2006.
14. As part of restructuring, the debt issuance framework in light of Fiscal Responsibility and Budget Management (FRBM) Act, 2003, the Internal Technical Group on central government securities had recommended the introduction of '*When Issued*'(*WI*) markets in central government securities. 'When, as and if issued, (commonly known as 'when-issued' (WI)) security refers to a security that has been authorised for issuance but not yet actually issued. WI trading takes place between the time a new issue is announced and the time it is actually issued. All 'when issued' transactions are on an 'if' basis, to be settled if and when the actual security is issued. When Issued market has two basic advantages: (a) It facilitates the distribution process for government securities by stretching the actual distribution period for each issue and allowing the market more time to absorb large issues without disruption, and (b) it also facilitates price discovery process by reducing uncertainties surrounding auctions. Transactions in a security on a When Issued basis shall be undertaken in the following manner: (i) WI transactions will be undertaken only in the case of securities that are being reissued. WI trading for issue of new securities will be considered at a later date. (ii) WI transactions would commence on the notification date and it would cease on the working day immediately preceding the date of issue. (iii) All WI transactions for all trade dates will be contracted for settlement on the date of issue. (iv) At the time of settlement on the date of issue, trades in the WI security can be netted off with trades in the existing security. (v) WI transactions may be undertaken only on NDS-OM. (vi) Any WI trade must have a primary dealer (PD) as a counterparty (both counterparties can be PDs). In other words, non-PDs cannot be both buyer and seller in a WI transaction. (vii) Only PDs can take a short position in the WI market. Non-PD entities can sell the WI security only if they have a preceding purchase contract for equivalent or higher amount. (viii) Open positions in the WI market are subjected to the following limits: (a) Non-PD entities—long position, not exceeding 5 percent of the notified amount. (b) PDs—long or short position, not exceeding 10 percent of the notified amount. (ix) In case a PD is unable to deliver securities to the buyer after the auction on the settlement (or issue) date, the transaction will be settled as per the default settlement mechanism of CCIL[3].
15. The NDS-OM members were permitted to enter into when issued transaction in central government securities that have been notified for issuance but not actually issued since August 2006.
16. With effect from 1 January, 2008, the covered transaction of short sales and when issued can be undertaken outside NDS-OM through the telephone or purchases in Primary market.
17. To facilitate the settlement of government securities transactions undertaken by non-bank and non-PD-NDS members and wider participation in government securities market, a new system of multi-modal settlement (MMS) in government securities market was introduced in June 2008. Under this system,

[3]RBI, 'When Issued' transactions in Central Government Securities RBI/2005-06/382 IDMD.No/3426/11.01.01 (D)/2005–2006.

settlement of securities leg of government securities transactions undertaken by the non-banks and non-PD-NDS members will continue to take place in the SGL account maintained with RBI whereas the funds leg will be settled through the fund accounts maintained by these entities with select commercial banks appointed as designated settlement banks (DSB) by CCIL. Secondary market transactions in government securities undertaken by mutual funds are being settled through DSB since 30 June 2008.

18. **Retail Market Development** The retail GSM can be developed by adopting one or more of the following models: (a) equity trading model, (b) purchases through MFs model and purchases using branches of commercial banks, post-offices and OTC exchange model. The third model would be the most suitable in India; it would contribute more than other models to the successful broadening and widening of the GSM because of the greater reach of banks, post-offices and so on in the length and breadth of the country. The stock market and MFs have a relatively limited reach in this context. In equity model, there are also chances of price manipulations and other frauds. It may be recalled here that MFs also have now initiated steps to sell their units through post-offices and so on. In any case, the RBI has introduced a scheme for retail investors to buy and sell government securities on stock exchanges such as equity trading. The scheme has the following features: (a) trading at the exchanges, (b) order-driven system, (c) anonymous trade matching, (d) rolling settlement, (e) intra-day multilateral netting of obligations, (f) settlement through depositories, (g) creation of a separate 'guarantee fund' by the exchange, and (h) trading by stock brokers if they satisfy capital and other prudential requirements.

After the introduction of trading of GSM in secondary market through the stock exchanges such as NSE and BSE, a retail debt market segment (RDM) on NSE has been introduced with effect from 16 January, 2003. Trading shall take place in the existing capital market segment of the Exchange. Trading in RDM takes place on the 'National Exchange for Automated Trading' (NEAT) system, a fully automated screen based trading system, which adopts the principle of an order-driven market. The RETDEBT Market facility on the NEAT system of capital market segment is used for entering transactions in RDM session. Trading in retail debt market is permitted under Rolling Settlement, wherein each trading day is considered as a trading period and trades executed during the day are settled based on the net obligations for the day. Settlement is on a $T + 2$ basis, that is, on the second working day. For arriving at the settlement day all intervening holidays, which include bank holidays, NSE holidays, Saturdays and Sundays, are excluded. Typically trades taking place on Monday are settled on Wednesday, Tuesday's trades settled on Thursday and so on. Trading members who are registered members of NSE in the capital market segment and wholesale debt market segment are allowed to trade in retail debt market (RDM) subject to fulfilling the capital adequacy norms. In BSE, the retail trading in G-Secs commenced on 16 January, 2003 in accordance with the SEBI Circular bearing ref. no. SMD/Policy/GSEC/776/2003 dated 10 January, 2003.

The retail debt market module of BSE aims at providing an efficient and reliable trading system for government securities. The trading takes place by electronic order matching based on price-time priority through the BOLT (BSE OnLine Trading) System with the continuous trading sessions from 9.00 a.m. to 3.30 p.m as is operational in the equities segment. Retail trading in G-secs is on a rolling settlements basis with a $T + 2$ delivery cycle. The clearing and settlement mechanism for the retail trading in G-Secs is based on the existing institutional mechanism available at BSE. The trades executed throughout the continuous trading sessions are netted out at the end of the trading hours through a process of multilateral netting. The transactions are netted out member-wise and then security-wise so as to determine the net settlement and payment obligations of the members. The delivery obligations and the payment orders in respect of these members are generated

by the clearing and settlement system of BSE. These statements indicate the pay-in and pay-out positions of the members for securities and funds who then give the necessary instructions to their clearing banks and depositories. The entire risk management and the clearing and settlement activities for the trades executed in the retail debt market system are undertaken by BSE Exchange Clearing House. The G-secs for retail trading through BSE can be held by investors in the same demat account as is used for equity at the depositories. NSDL and CDSL hold the combined quantity of G-Secs in their SGL-II A/cs of RBI, meant only for client holdings. Government securities (G-Secs) are one of the best investment options for an individual investor today in the financial markets due to the following factors:

- Zero default risk—due to their sovereign guarantee, ensures the total safety of all investments in G-Secs
- Lower average volatility in bond prices
- Greater returns as compared to the conventional safe investment avenues such as bank deposits and fixed deposits, which also contain credit risk
- Higher leverage—Greater borrowing capacity against G-Secs due to their zero risk status
- Wider range of innovations in the nature of securities such as T-Bills, index-linked bonds, partly-paid bonds and others such as STRIPS and securities with call and put options to follow soon
- Better and greater features to suit a large range of investment profiles and investor requirements
- Growing liquidity and the increased turnover in recent times in the Indian debt markets

The retail GSM would broaden investor base for public debt which can provide stability and liquidity to the GSM due to heterogeneous expectations, trading horizons and preferences of the investors. It would also provide additional channel of investment for the average and risk-averse investors, which can help to increase the level of household savings.

Sovereign Gold Bond Scheme (SGB) 2015[4]

SGBs are government securities denominated in grams of gold. They are substitutes for holding physical gold. Investors have to pay the issue price in cash and the bonds will be redeemed in cash on maturity. The bond is issued by Reserve Bank on behalf of Government of India. Persons resident in India as defined under Foreign Exchange Management Act, 1999 are eligible to invest in SGB. Eligible investors include individuals, HUFs, trusts, universities, charitable institutions and so on. Bonds are sold through scheduled commercial banks (excluding RRBs), SHCIL offices and designated post offices either directly or through their agents. The customers will be issued Certificate of Holding on the date of issuance of the SGB. Certificate of Holding can be collected from the issuing banks/SHCIL offices/post offices/agents or obtained directly from RBI on email, if email address is provided in the application form.

The bonds are issued in denominations of 1 g of gold and in multiples thereof. Minimum investment in the bond shall be 2 g with a maximum buying limit of 500 g per person per fiscal year (April–March). Price of bond will be fixed in Indian Rupees on the basis of the previous week's (Monday–Friday) simple average price for gold of 999 purity published by the India Bullion and Jewellers' Association Ltd. (IBJA). The issue price will be disseminated by the Reserve Bank of India. The bonds bear interest at the rate of

[4]https://www.rbi.org.in/Scripts/FAQView.aspx?Id=109

2.75 percent (fixed rate) per annum on the amount of initial investment. Interest will be credited semi-annually to the bank account of the investor and the last interest will be payable on maturity along with the principal. On maturity, the redemption proceeds will be equivalent to the prevailing market value of grams of gold originally invested in Indian Rupees. The redemption price will be based on the simple average of previous week's (Monday–Friday) closing gold price for 999 purity published by the IBJA. Though the tenor of the bond is 8 years, early encashment/redemption of the bond is allowed after fifth year from the date of issue on coupon payment dates. The bond will be tradable on Exchanges, if held in demat form. It can also be transferred to any other eligible investor.

There are certain benefits for investing in SGBS. The benefits are as follows: (1) It is available both in demat and paper form. (2) It will carry sovereign guarantee both on the capital invested and the interest. (3) Bonds can be used as collateral for loans. (4) Bonds would be allowed to be traded on exchange to allow early exits for investors who may so desire. (5) In Sovereign Gold Bonds, capital gains tax treatment will be the same as for physical gold for an 'individual' investor. The department of revenue has said that they will consider indexation benefit if bond is transferred before maturity and complete capital gains tax exemption at the time of redemption.

In the country such as India, the demand for physical gold is quite large. This causes the government to import physical gold in large quantities which, in turn, reduces the foreign exchange reserve. Issuance of the SGB may help the government in reducing the physical demat and thus bring down the import bill for physical gold and foreign exchange reserve and make the economy stronger.

18.5.6 Primary Market Transactions of Government Securities

The cumulative average growth rate (CAGR) of gross and net market borrowings of central and state governments have been varied between 17 and 22.5 percent, which imply that the market borrowings of central and state governments have been increasing continuously in terms of absolute values. The percentages of central government market borrowings to total borrowings have been quite higher than the state governments' market borrowings, which mean that the state governments' securities market is quite small in relation to the central government securities market. But in the relative terms, the percentage of state government borrowings has been increasing more than that of the central government (Table 18.1).

Table 18.1 Market borrowings of central and state governments (Percentage)

Year	*Central government*		*State government*	
	Gross	*Net*	*Gross*	*Net*
	1	*2*	*3*	*4*
1980–1981	89.61	92.67	10.39	7.33
1985–1986	80.30	83.98	19.70	16.02
1990–1991	77.77	75.70	22.23	24.30

(*Contd.*)

1995–1996	86.59	81.87	13.41	18.13
2000–2001	89.65	85.14	10.35	14.86
2005–2006	88.04	86.41	11.96	13.59
2006–2007	89.60	88.63	10.40	11.37
2007–2008	73.52	66.07	26.48	33.93
2008–2009	72.95	70.02	27.05	29.98
2009–2010	94.06	77.44	25.04	22.56
2010–2011	82.17	78.69	17.83	21.31
2011–2012	79.10	77.99	20.90	22.01
2012–2013	79.52	77.58	20.48	22.42
2013–2014	76.70	72.52	23.30	27.48
CAGR	18.12	17.08	21.33	22.44

Source: Reserve Bank of India, Handbooks Various Issues

Notes: (1) Net market borrowing of centre and state combined for 2008–2009 includes ₹5.47 billion pertaining to a security with call and put option. (2) Gross state government market borrowing includes additional market borrowings of 100 billion for 2002–2003, 266.23 billion for 2003–2004 and 169.43 billion for 2004–2005 under the State Debt Swap Scheme. (3) Gross borrowings of the state governments for 2013–2014 have been estimated while those of centre are budget estimates. (4) Market borrowing of the centre includes dated securities and 364-day treasury bills.

The major participants in the market for government securities belong to one of the five categories: (a) Central and state governments whose holdings represent inter-governmental transfer of resources which do not necessitate any transfer of funds between the public and private sectors; (b) banking sector comprising RBI, SBI, other commercial banks and co-operative banks; (c) primary dealers; (d) insurance companies, (e) financial institutions; (f) mutual funds; (g) provident funds; and (i) 'other', which include special financial institutions, joint-stock companies, local authorities, trusts, individuals and non-residents. Till the early 1950s, the Indian GSM was predominantly a market for individuals; institutions accounted for only a small part of the ownership of the government securities.

Over the time the ownership pattern has changed. Now central government does not hold any securities. The RBI does not hold any state government securities; its ownership of the central government securities has declined over the years. The share of banks in both the central and state governments securities has increased very significantly and now banks are the predominant holders of all government securities in India. The share of insurance companies in the central government and state government securities has remained more or less constant. The shares of other primary dealers, financial institutions, provident funds and others in the central government and state government securities have been negligible. At present, on the whole, banks hold around 70 percent of central and state government securities. The ownership pattern of the government securities suggests that the investor base has been diversified by the entry of co-operative banks, regional rural banks, mutual funds and non-banking financial companies in the recent period. The entry of 100 percent gilt mutual funds has broadened the retail investor base. As a result, the share of 'others' category in the outstanding government securities has increased, particularly in recent years. Nevertheless, commercial banks and Life Insurance Corporation of India (LIC) continued to hold the largest share of government stocks.

The share of commercial banks' holding, on the other hand, declined steadily from 2001 to 2007, but after that it has increased slightly. The holding of government securities by commercial banks has been driven by interest rate changes, apart from the SLR requirement. As part of the financial reforms, the SLR requirement for banks was gradually reduced to 21.5 percent by February 2015 from the peak of 38.5 percent in February 1992. Owing to decline in interest rates and low demand for credit, banks found it attractive to invest in SLR securities. In the recent years, however, banks restricted incremental investment and liquidated excess investment in government securities in recent years on account of rise in interest rates and increased credit demand. Thus, SLR securities held by commercial banks are now very close to the prescribed limit of 21.5 percent (Table 18.2).

Table 18.2 Ownership pattern of outstanding government securities (percentage)

Government and year	*RBI*	*Banks*	*Primary dealers*	*Insurance companies*	*Financial institutions*	*Mutual fund*	*Provident fund*	*Others*
Central govt.	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*
1969	37.5	20.4	—	11.5	—	—	23.3	4.3
1991	24.80	55.11	—	—	—	—	—	5.37
1992	22.30	59.83	—	—	—	—	—	2.05
1996	8.98	64.33	—	—	—	—	—	3.45
1997	3.46	67.50	—	—	—	—	—	5.93
1998	12.84	57.70	—	—	—	—	—	7.97
1999	10.90	58.92	—	—	—	—	—	9.67
2000	8.33	60.67	—	—	—	—	—	10.11
2001	9.20	60.99	1.69	—	—	—	—	6.03
2007	9.25	47.92	0.42	—	—	—	—	15.55
2008	7.83	50.74	0.24	19.23	1.06	0.34	2.91	17.64
2009	8.55	48.76	0.11	17.03	1.41	0.54	3.03	20.57
2010	11.04	50.43	0.09	17.42	1.91	0.25	3.40	15.46
2011	10.86	51.37	0.09	19.46	1.79	0.53	3.69	12.20
2012	13.34	54.56	2.45	18.74	0.20	0.58	3.83	6.29
2013	16.99	43.74	0.28	18.55	0.74	0.68	7.37	8.79
2014	16.05	44.52	0.11	19.53	0.72	0.78	7.18	10.14
2015	13.47	43.30	0.30	20.86	2.06	1.89	7.58	9.58
2016	13.46	41.81	0.32	22.17	0.71	2.08	6.00	12.48
State govt.	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*
1969	0.3	37.9	—	—	—	—	—	8.0
1991	—	78.55	—	—	—	—	—	10.91

(*Contd.*)

1992	—	79.12	—	—	—	—	—	9.78
1996	—	67.65	—	—	—	—	—	16.21
1997	—	—	—	—	—	—	—	15.79
1998	—	64.77	—	—	—	—	—	15.63
1999	—	62.43	—	—	—	—	—	13.44
2000	—	61.87	—	—	—	—	—	13.72
2001	—	60.74	—	—	—	—	—	14.19
2007	—	42.75	—	—	—	—	—	25.02
2008	—	52.25	0.55	22.40	0.53	0.02	9.79	14.45
2009	—	58.22	0.27	20.49	0.94	0.45	8.83	10.80
2010	—	58.46	0.21	21.71	2.74	0.02	8.09	8.77
2011	—	51.44	0.11	24.66	2.64	0.06	8.02	13.08
2012	—	51.19	4.05	25.78	0.01	0.05	7.99	10.92
2013	0.038	52.47	0.20	28.51	0.40	1.40	18.53	1.11
2014	0.055	52.40	0.23	30.44	0.40	0.82	15.04	0.58
2015	0.022	45.97	0.17	33.15	0.38	0.35	15.77	4.15
2016	0.039	46.02	0.27	32.50	0.24	1.04	15.94	3.91

Note: Percentages do not add to 100 due to small amount being left out—means no or negligible ownership.
Source: RBI, RCF, Handbook Various Issues

The preponderance of institutional ownership of government securities has certain important implications for the working of the government securities market. First, as in the case of the treasury bills market, the government bonds market has also remained narrow. A narrow market precludes large-scale open market operations by the RBI, since they would unusually disturb security prices. Second, institutional investors such as PF, LIC and statutory financial institutions rarely sell more than a small percentage of their holdings; they tend to hold securities till maturity. The volume of transactions for the purpose of varying their portfolio has remained limited. It is mainly banks and corporate holders that engage in substantial buying and selling of securities on the stock exchanges. The secondary market for government securities is, therefore, highly limited and less active. Dealing activity in the market is very small; there has been a considerable shrinkage in floating stock in the market at any given time; and whatever dealings that take place are confined mostly to the Mumbai market.[5] Third, because of a very small number of big investors, the market has become more predictable. Fourth, new issues need not be made in a great variety. The new interest in the market and an increased demand for securities can usually be encouraged by making a small number of relatively large new issues because institutional investors fall into fairly homogeneous groups with broadly similar investment preferences.[6]

[5]The growth of a secondary market tends to be inhibited when the Central Bank undertakes refunding of debt on a significant scale. If the extent of refunding is small, investors would deal among themselves for changing maturities.
[6]Bank of England, 'Official transactions in the gilt-edged market' in H G Johnson (ed.), *Readings in British Monetary Economics*, Clarendon Press, Oxford, 1972, p. 444.

Table 18.3 Ownership pattern of Government of India dated security

S.N.	Year / Category	2007	2008	2009	2010	2011	2012	2013
		1	2	3	4	5	6	7
1	Commercial banks	41.57	42.51	38.85	38.03	38.42	36.28	34.50
2	Bank-primary dealers	26.19	24.78	8.05	9.22	8.61	9.83	9.36
3	Non-Bank PDs	8.11	8.75	0.29	0.14	0.11	0.10	0.11
4	Insurance companies	0.41	0.34	23.20	22.16	22.22	21.08	18.56
5	Mutual funds	0.44	0.79	0.82	0.40	0.18	0.17	0.68
6	Co-operative banks	2.97	3.22	2.92	3.35	3.41	2.98	2.81
7	Financial institutions	0.70	0.41	0.41	0.35	0.35	0.37	0.75
8	Corporates	4.79	3.48	4.72	2.99	1.94	1.38	1.14
9	FIIs	0.18	0.52	0.24	0.59	0.97	0.88	1.61
10	Provident funds	6.68	6.38	6.59	6.76	7.06	7.45	7.37
11	RBI	6.51	4.78	9.71	11.76	12.84	14.41	16.99
12	Others	1.86	4.38	4.20	4.24	3.89	5.07	6.12

Note: Government of India dated securities includes securities issued under the Market Stabilisation Scheme and the special securities such as bonds issued to the oil marketing companies and so on.

Source: RBI-Bulletin, 2007, 2009, 2011, 2013.

Table 18.3 shows the ownership pattern of the Government of India dated securities. The share of commercial banks has been continuously declining since 2007. The share of non-bank primary dealers has also been declining over the years. On the other hand the share of insurance companies has increased. Other major shareholder of the dated government securities are RBI, provident funds and others. The share of RBI and provident funds has been increasing during the said period, that is, 2007–2013.

The maturity pattern of government securities has importance from the point of view of the working of monetary policy and the management of public debt. Government securities are issued with fixed maturities; there are no securities which can be called perpetuities, that is, claims which will never be redeemed. In the UK, perpetuities are known as consoles. It is true that undated or non-terminable securities, that is, those that have no final date by which they must be redeemed come close to perpetuities, but, they are not strictly so because they are redeemable on 3 months' notice at the government's option. Sometimes, securities bear a range of dates within which they might be redeemed; the investors cannot redeem them before the first date, but they must be redeemed on or before the last date. In India, there are no such securities of dual maturity. In a special sense, the major part of government debt does not mature at all because a large part of maturing securities are converted into new securities, or new securities are issued to repay old securities. This is a unique feature of the government securities market. A quick study of the new issues of government securities shows that, with the passage of time, a change in the maturity pattern of fresh issues has taken place.

Table 18.4 reveals the changing maturity pattern of the outstanding central government securities. The proportion of short-term (maturity period below 5 years) securities increased between 1951 and 1971; thereafter, it declined very significantly until about 1993, and again increased sharply until 1999 after which it has declined significantly in 2003. The share of medium-term (maturity period between 5 and 10 years)

securities also increased between 1951 and 1965, declined drastically until about 1989, after which increased substantially, and then declined again. The proportion of the long-term securities[7] (maturity over 10 years) declined first (between 1951 and 1965) and increased remarkably in later years till 1991, after which it has declined sharply again till 1999, after which it has increased once again. Till 1991 the central government had been issuing 85.5 percent of the securities of maturity more than 10 years. In the year 1995, it has come down to 16 percent, further it has increased to 46 percent during 2004–2005, but again it has declined to 36 percent in the year 2010 and again increased to 53 percent in 2012 and subsequently declined to 43 percent in 2016. Thus, there have been notable ups and downs in the shares of different maturity segments of the central government securities during 1951–2016. During the 1990s, there has been an unmistakable increase in short and medium-term maturities, and a decline in long-term maturities. These trends were reversed after 1999. Reflecting the elongation of maturity of the primary issuances, the composition of outstanding government securities has undergone a transformation with the sharp increase in the share of securities with more than 10-year maturity in total outstanding stock since 1998–1999 and further declining during 2001–2016.

Table 18.4 Maturity pattern of outstanding central government securities 1951–2016 (Percentage)

Year	*Below 5 Years*	*Between 5 and 10 Years*	*Over 10 Years*	*Undated*
1951	22.2	23.8	36.1	17.9
1956	26.1	40.9	16.0	17.1
1961	33.7	29.4	26.9	10.0
1971	36.6	14.5	43.0	5.9
1980	13.6	14.3	70.0	2.0
1984	12.4	14.2	72.4	1.0
1989	9.2	9.0	81.8	—
1991	8.6	5.6	85.8	—
1995	25.3	27.4	16.12	—
2000	35.01	39.25	25.74	—
2001	30.61	35.57	33.82	—
2002	26.39	34.66	38.95	—
2003	22.41	30.94	46.65	—
2004	23.80	30.53	45.67	—
2005	23.78	29.77	46.45	—
2006	23.98	30.23	45.78	—
2007	30.13	29.88	39.99	—

(*Contd.*)

[7]It is necessary to be clear about the terminology in this context. According to a very widespread usage, claims with maturity of 1 year or less are regarded as short-term, those between 1 and 5 years as medium-term, and those beyond five years as long-term. In the context of maturity of government securities, however, these conventional demarcations of maturity dates appear to have been abandoned not only in India, but also abroad. In the context of government securities, the RBI seems to be using a different terminology. It regards securities of less than five-year maturity as 'short-dated', those between five to ten years as 'medium' or 'medium-short'; those between 10 and 15 years as 'medium-long'; and those beyond 15 years as 'long-dated'.

2008	25.90	34.50	39.60	—
2009	23.78	38.67	37.55	—
2010	28.95	34.09	36.95	—
2011	23.75	37.62	38.63	—
2012	21.47	24.80	53.72	—
2013	30.98	34.95	34.07	—
2014	29.93	31.92	38.53	—
2015	28.23	30.35	41.40	—
2016	26.84	29.60	43.54	—

Source: RBI, Handbook of Statistics, Various Issues.

The level and changes in the rate of return on investment in government securities can be studied by observing changes in the coupon rate, the redemption yield and the running yield. The coupon rate or the bond rate is the interest rate paid on the face value of the bond, and which is written or mentioned on the bond itself. If the borrower issues a bond of ₹100 for a 20-year period at 5 percent per annum, it would be described as a 5 percent bond, and would be said to have a coupon or bond rate of 5 percent. When the bond is issued and purchased at its face value, the redemption yield would be equal to the bond rate. But when the investor purchases the bond at less (greater) than its face value, that is, at a discount (premium), the redemption yield would be higher (lower) than the bond rate. The running yield is arrived at by relating the coupon rate and discount (premium), if any, with the market price of the security. While the redemption yield is calculated by assuming that the bond is held or retained by the investor till its maturity, the running yield represents the return available to the investor where he to sell his security on the market at a prevailing price; it is a notional yield if he does not actually sell the security on the market before its maturity date.

We see from Table 18.5 that the weighted average coupon rate (WACR) on central government securities increased from about 7 percent per annum in 1980–1981 to 13.69 percent in 1996–1997, after which it has declined to 5.71 percent in the year 2003–2004 and further it has shown a fluctuating trend. The WACR on central and state governments securities, respectively, have been nearly the same in all the years. Elongation of maturity profile in the recent years has enabled the formation of yield curve for a longer horizon. The process of maturity elongation was facilitated by the benign interest rate regime which prevailed during the first half of the current decade. This brought down the cost of resources raised for financing the government deficit. The weighted average yields, which started moderating from 1996 to 1997, declined to 5.71 and 6.13 percent for the central and state government securities, respectively, by 2003–2004. The yields have been 7.89 percent for central government and 8.28 percent for state governments in 2015–2016, respectively.

Table 18.5 Interest rates on central and state Government dated security

Year	*Central government securities*		*State government securities*	
	Coupon rate range	*Weighted average*	*Coupon rate range*	*Weighted average*
1980–1981	5.98–7.50	7.03	6.75	6.75
1981–1982	6.00–8.00	7.29	7.00	7.00

(*Contd.*)

1982–1983	6.25–9.00	8.36	7.50	7.50
1983–1984	7.75–10.00	9.29	8.25–8.75	8.58
1984–1985	7.75–10.50	9.98	9.00	9.00
1985–1986	9.00–11.50	11.08	9.75	9.75
1986–1987	10.00–11.50	11.38	11.00	11.00
1987–1988	10.50–11.50	11.25	11.00	11.00
1988–1989	10.00–11.50	11.4	11.50	11.50
1989–1990	10.50–11.50	11.49	11.50	11.50
1990–1991	10.50–11.50	11.41	11.50	11.50
1991–1992	10.50–12.50	11.78	11.50–12.00	11.84
1992–1993	12.00–12.75	12.46	13.00	13.00
1993–1994	12.00–13.40	12.63	13.50	13.50
1994–1995	11.00–12.71	11.90	12.50	12.50
1995–1996	13.25–14.00	13.75	14.00	14.00
1996–1997	13.40–13.85	13.69	13.75–13.85	13.82
1997–1998	10.85–13.05	12.01	12.30–13.05	12.82
1998–1999	11.10–12.60	11.86	12.15–12.50	12.35
1999–2000	10.73–12.45	11.77	11.00–12.25	11.89
2000–2001	9.47–11.70	10.95	10.50–12.00	10.99
2001–2002	6.98–11.00	9.44	7.8010.53	9.20
2002–2003	6.57–8.62	7.34	6.60–8.00	7.49
2003–2004	4.62–6.35	5.71	5.78–6.40	6.13
2004–2005	4.49–8.24	6.11	5.60–7.36	6.45
2005–2006	6.70–7.79	7.34	7.32–7.85	7.63
2006–2007	7.06–8.75	7.89	7.65–8.66	8.10
2007–2008	7.55–8.64	8.12	7.84–8.90	8.25
2008–2009	7.69–8.81	7.69	5.80–9.90	7.87
2009–2010	6.07–8.43	7.23	7.04–8.58	8.11
2010–2011	5.98–8.67	7.92	8.05–8.58	8.39
2011–2012	7.80–10.01	8.52	8.36–9.49	8.79
2012–2013	7.86–8.82	8.36	8.42–9.31	8.84
2013–2014	7.16–9.40	8.45	7.57–9.94	9.18
2014–2015	7.65–9.42	8.51	8.00–9.66	8.58
2015–2016	7.54–8.27	7.89	7.95–8.88	8.28

Source: RBI, Handbook various issues

Columns one to three in Table 18.6 show that the yield to maturity has been mostly higher for longer maturities as compared to relatively shorter maturities, apart from 2011–2012 to 2012–2013. Columns four and six in Table 19.6 highlight the interesting facts that during 1995–1996 to 2003–2004, while the weighted

average yield has declined, the weighted average maturity has increased; and these changes have been quite substantial. During 2004–2005 to 2015–2016 a particular pattern has not been followed. The weighted average yield on government securities, however, took an upturn in 2004–2005 and continued to rise in 2007–2008. Further it has not followed any particular trend during 2008–2009 to 2013–2014. This was on account of the hardening of interest rates due to uncertainty surrounding international oil prices, upturn in global interest rate cycle, buoyant domestic growth and rise in domestic inflation. The average maturity of the primary issuances increased mainly due to encouraging investor response. The average maturity has been varied between 11 and 15 years during 2004–2005 to 2015–2016.

Table 18.6 Yield and maturity of central government securities issued in recent years

(Percentages/Years)

Years	*Range of YTMs at primary issues*			*WAY (%)*	*Range of maturities of new loans (Yrs.)*	*WAM (Yrs.)*	*WAM of outstanding stocks (Yrs.)*
	Under 5 Years	*5–10 Years*	*Over 10 Years*				
	(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*
1995–1996	13.25–13.73	13.25–14.0	—	13.75	2–10	5.7	—
1996–1997	13.40–1.72	13.55–13.85	—	13.69	2–10	5.5	—
1997–1998	10.85–12.14	11.15–13.05	—	12.01	3–10	6.6	6.5
1998–1999	11.40–11.68	11.10–12.25	12.25–12.60	11.86	2–20	7.7	6.3
1999–2000	—	10.73–11.99	10.77–12.45	11.77	5–19	12.6	7.1
2000–2001	9.47–10.95	9.88–11.69	10.47–11.70	10.95	2–20	10.6	7.5
2001–2002	—	6.98–9.81	7.18–11.0	9.44	5–25	14.3	8.2
2002–2003	—	6.65–8.14	6.84–8.62	7.34	7–30	13.8	8.9
2003–2004	4.69	4.62–5.73	5.18–6.35	5.71	4–30	14.94	9.78
2004–2005	5.90	5.53–7.20	4.49–8.24	6.11	5–30	14.13	9.63
2005–2006	—	6.70–7.05	6.91–7.79	7.34	5–30	16.90	9.92
2006–2007	7.69–7.94	7.06–8.29	7.43–8.75	7.89	4–30	14.72	9.97
2007–2008	-	7.58–8.44	8.34–8.64	8.23	6–30	14.32	10.39
2008–2009	7.71–8.42	7.69–8.77	7.77–8.81	7.69	6–30	13.80	10.45
2009–2010	6.09–7.25	6.07–7.77	6.85–8.43	7.23	5–15	11.16	9.82
2010–2011	5.98–8.67	7.17–8.19	7.64–8.63	7.92	5–30	11.62	9.78
2011–2012	8.21–8.49	7.80–10.01	8.25–9.28	8.52	7–30	12.66	9.60
2012–2013	8.82–8.21	7.86–8.76	7.91–8.06	8.36	5–30	13.50	9.67
2013–2014	7.22–9.00	7.16–9.40	7.36–9.40	8.45	6–30	15.05	10.00
2014–2015	—	7.66–9.28	7.65–9.42	8.51	6–30	14.66	10.23
2015–2016	—	7.54–8.10	7.59–8.27	7.89	6–40	16.03	10.50

Note: YTM = Yield to maturity; WAY = Weighted average yield; WAM = Weighted average maturity
Source: RBI, RCF, 2006–2007; RBI, Annual Reports, 2014, 2010, 2016.

18.5.7 Secondary Market Transactions of Government Securities

The turnover in secondary market also gives us an idea about the size of the government securities market. The secondary market transactions are of two types: outright and repos. Tables 18.7 and 18.8 reflect the growth in the secondary market in government securities in India. While the outright transactions in central government securities increased from ₹18,072 crore in 1995 to ₹14,821,889 crore in 2016, the repos transactions increased from ₹80,520 crore to 4,445,064 crore during the same period. The outright transactions have been lower than repos transactions during 1995–1996 and again during 2004–2010. The percentage of outright transactions to total central government transactions has been varied between 18 and 87 percent and the share of repo transactions has been varied between 12 and 81 percent during 1995–2016. The secondary market in state government securities is very small compared to the market for central government securities. During the period 2003–2016, while the share of outright transactions in state government securities has been varied between 17 and 100 percent of total state government securities and the share of repo transactions has been changed from 0.68 to 82 percent. The repo transactions have exceeded the outright transactions during 2005–2008. Secondary market transactions for state governments have increased continuously during the same period (Table 18.7).

Table 18.7 Secondary market transactions in government securities

Year	*Central government securities (CGS)*				*State government securities (SGS)*			
	Outright (₹ crore)	*% to Total CGS*	*Repo (₹ crore)*	*% to Total CGS*	*Outright (₹ crore)*	*% to Total SGS*	*Repo (₹ crore)*	*% to Total SGS*
1995	18072.13	18.33	80520.86	81.67	231.75	100.00	0	0.00
1996	40295.84	46.99	45461.69	53.01	796.84	100.00	0	0.00
1997	119355	87.85	16514.32	12.15	1279.97	100.00	0	0.00
1998	115358.1	79.71	29369.66	20.29	1414.2	100.00	0	0.00
1999	330336.1	83.56	65008.64	16.44	3346.59	100.00	0	0.00
2000	429665.5	81.02	100658.7	18.98	2796.63	99.44	15.69	0.56
2001	1036952	80.58	249892.9	19.42	4551.56	90.88	457	9.12
2002	1285666	74.16	448018.5	25.84	8816.08	99.32	60	0.68
2003	1593575	68.14	745256.3	31.86	13713.1	65.92	7088.47	34.08
2004	985990	43.60	1275264	56.40	26564.86	76.13	8329.73	23.87
2005	710428	35.91	1268151	64.09	20652.46	42.69	27726.07	57.31
2006	824556.7	28.63	2055547	71.37	12857.82	17.78	59450.7	82.22
2007	1094069	26.99	2958822	73.01	14087.31	25.70	40720.77	74.30
2008	1933226	35.60	3497635	64.40	23978.3	29.69	56791.62	70.31
2009	2681838	36.64	4637920	63.36	72391.2	73.46	26151.11	26.54

(*Contd.*)

2010	2652720	42.95	3523562	57.05	59283.81	78.23	16500.66	21.77
2011	2602239	51.35	2465561	48.65	46683.65	70.56	19474.84	29.44
2012	4628529	65.49	2438782	34.51	99721.07	58.69	70176.68	41.31
2013	8685864	66.15	4445064	33.85	150993.2	86.11	24353.99	13.89
2014	8523107	68.99	3829811	31.00	164003	60.27	108080	39.72
2015	8672019	60.82	5585876	39.17	297658	67.32	144458	32.67
2016	14821889	63.60	8481659	36.39	559055	55.88	441371	44.11

Source: RBI, RCF, RBI-Handbook of Statistics 2011, 2014, 2016.

Table 18.8 shows that the number of trades, net traded value in a year and average daily value on the wholesale debt market (WDM) of NSE are on the increase, and the share of government dated securities in the WDM business has been varied between 41 and 95 percent. The trading members of the NSE, FIs, MFs, PDs and Indian as well as foreign banks are the participants in the secondary market for government securities. The banks, members and PDs are the major operators in this market. Net traded value, average daily value, number of trades on the WDM is declining during 2003–2004 to 2014–2015, and the share of government dated securities in the WDM business has come down from 92 to 64 percent during the said period. Trading members, Indian and foreign banks and PDs are the major operators in the market during the recent period. As a result of the developmental measures undertaken, the volume of transactions in the secondary segment of the government securities market increased manifold over the past decade. However, markets are active and liquid when interest rates decline but turn illiquid when rates rise. This has resulted in the slowdown in the turnover in recent years. The trading pattern of government securities indicates that most of the trading activity takes place in central government securities.

Table 18.8 Features of wholesale debt market (WDM) segment of National Stock Exchange (NSE)

Year	*Turnover (in percentage)*					*Business growth (in crores)*			*Share of govt. securities (%)*
	Trading member	*FIs/MFs*	*PDs*	*Indian banks*	*Foreign banks*	*Net traded value*	*Average daily value*	*No.of trades*	
2000–2001	23.2	4.2	22.1	33.5	16.9	428581.5	1483	64470	89.5
2001–2002	23.5	4.2	22.5	36.6	13.2	947191.2	3277.5	144851	94.4
2002–2003	24.8	3.8	22.0	38.8	10.6	1068701.4	3598.3	167778	94.5
2003–2004	34.8	4.6	17.0	36.4	7.3	1316096.2	4476.5	189518	92.9
2004–2005	34.0	5.1	18.5	29.9	12.5	887293.6	3028.3	124308	78.5
2005–2006	32.0	3.9	21.9	28.1	14.1	475523.5	1754.7	61891	41.3
2006–2007	30.9	2.7	19.8	26.0	20.6	219106.5	898	19575	69.0
2007–2008	38.2	2.3	8.6	23.8	27.1	282317.0	1138	16179	70.8

(*Contd.*)

2008–2009	44.7	3.4	6.6	18.1	27.3	335951.5	1411.6	16129	81.7
2009–2010	49.2	2.6	4.6	19.8	23.7	563815.9	2359.1	24069	69.9
2010–2011	53.5	2.4	4.2	13.1	26.8	559446.8	2255.8	20383	72.5
2011–2012	54.5	4.5	4.2	15.3	21.6	633178.6	2649.3	23447	68.7
2012–2013	60.5	3.4	4.2	10.5	21.3	792213.9	3260.1	26974	74.1
2013–2014	62.3	3.3	3.8	8.8	21.8	851433.6	3503.8	21143	66.2
2014–2015	56.0	7.2	2.7	13.6	20.6	772369.1	3017.1	18789	64.3

Source: Indian Security Market-A Review, ISMR, NSE, 2015.

18.5.8 Implications for Monetary Policy

Let us see if there has been any conflict between the objectives of debt management and monetary policy. How has the RBI tried to resolve the conflict, if there has been any? These are weighty issues which belong to the realm of theory and practice of monetary policy. We try to provide answers, to these queries in the context of the working of the government securities market in our country. An important part of monetary management is the management of the government securities market. The Central bank can execute the interest rate policy through changes in the bank rate, by fixing interest rates on government borrowing and lending, and by influencing the behaviour of prices and yields in the gilt-edged market. The management of the gilt-edged market has also a considerable bearing on the advances and liquidity of commercial banks, such as to help or hinder monetary policy. But this is only one of the objectives of debt management. The other objective is to ensure that suitable and inexpensive finance for the exchequer is available and will continue to be available in future.

The question one may raise in this context is, if the dominant objective of the operations in the market for government securities is to maximise the demand for them, does its achievement suffer when interest rates are kept low? There is no doubt that a relatively low return on government claims discourages demand for those claims. But this difficulty has been overcome by creating a captive market for them. In addition, the demand for government securities even at low rates of return has to be explained in terms of the lack of alternative investment opportunities for some institutional investors. These investors cannot participate beyond a limit in the share market, and the commercial bills market, call market and mortgage market are all underdeveloped. Therefore, there has not been much choice before them but to invest in government securities.

Why has the objective of maintaining stability in the market assumed such an overwhelming importance? This is because the size of the amount of funds to be raised each year for fresh capital and for refinancing requirements has become very large. Apart from the amount to be raised, the need for the successful issue of rupee loans arises because, in India, the volume of currency and treasury bills as a proportion of the total debt is very high. In a situation such as this, the failure to place a large portion of required funds with the purchasers of gilt-edged securities will lead to a further calamitous rise in the volume of currency (through deficit financing) and treasury bills. This would mean a similar rise in the monetary base in the economy. In the UK also, this consideration has greatly influenced debt management policy, although the share of currency and treasury bills in the total debt there is much lower than in India.

In the United States and the UK, OMOs in government securities for the purpose of monetary management have become limited with the growth of government debt. A combination of policies of trading in treasury bills ('bills only' till the early 1960s, and 'bills usually' thereafter in the United States) for monetary management and in the government securities for debt management is adopted there. In India, trading in treasury bills is also for the purpose of government financing. It has not been used actively for affecting bank reserves. Partly, this must have been due to the fact that bank holdings of TBs were very limited till recently. In the recent past, there has been an increase in bank holdings of TBs. Thus, the scope for employing a combination of policies mentioned above has now increased in India.

As we know that, apart from banks, most other holders of government securities hold them firmly up to maturity, and that they do not buy and sell securities in large amounts—is not this concern with stability in the market a little too excessive and misplaced? This is not so in fact, because ready 'potential marketability' is desired by all investors, whether they actually sell their holdings or not. Most shareholders rarely sell their shares on the market, but they would be panicky if the marketability of shares becomes highly restricted. Similarly, '.ability to deal freely at all times is highly important... although an institution may not often wish to deal in such amounts, yet if it thought that there was a risk of its not being able to do so at any time that it wished, it would feel that its liquidity and its freedom of manoeuvre were becoming impaired and would become increasingly reluctant to maintain its investment in gilt-edged stocks'.[8]

Favourable conditions in the GSM cannot be maintained merely by not varying interest rates on government securities. It also requires the rejection of orthodox monetary policy which relies on bank rate variations to influence economic activity. In the free market, variations in the bank rate ought to cause variations in interest rates on government securities and their prices. Although bank rate policy in India certainly lacks boldness and promptness *inter alia*, for reasons connected with its impact on the government securities market, the use of the technique could not be frozen because of the imperatives of the inflationary situation. In fact, till 1980, it was one of the more actively used techniques in our country. This created a conflict between debt management policy and monetary policy. In the face of such a conflict, the GSM was insulated from the effects of variations in the bank rate by pegging interest rates on them, encouraging sales of treasury bills by adjusting rates on those bills, and by conveying to the market that the RBI did not want the gilt-edged market to be affected when the bank rate is changed.

In the context of heavy inflationary pressures, non-utilisation of OMOs as a monetary technique, and the moderation in executing bank rate policy, there was a need for controlling bank liquidity by using a technique which did not destabilise the government securities market. This was done through the active use of variations in the reserve ratio, the statutory liquidity ratio and the technique of moral suasion. The RBI has been using the former technique actively since 1960; in certain years it was used along with changes in the bank rate. In the past many years, while the bank rate was left unchanged, the reserve ratio was changed a number of times. Similarly, frequent communications from the RBI to commercial banks and regular meetings between the RBI Governor and banks have become a necessary part of the RBI policy. The active use of the technique of variations in cash reserves and SLR may be regarded as an attempt by the RBI to strike a mean between achieving the objectives of debt management on the one hand, and controlling inflation on the other.

In the United States, the working of the GSM is said to have weakened monetary policy because of the existence of securities repurchase agreements. Dealers in government securities need large amounts of funds

[8]Bank of England, *op. cit.*, p. 441.

which they borrow from banks, non-financial corporations and others. Although a sizeable fraction of dealer loans are demand obligations, some have specific maturities ranging from one day to several months. Such loans with specific maturities are extended under a contract involving the actual sale of securities to the lender by the borrowing dealer with a commitment on the part of the latter to repurchase the securities within a specified time at the same price plus a stipulated interest charge. It has been said that the development of this innovative arrangement during the 1950s tended to weaken monetary policy in the United States. It follows from what we have said earlier that in the absence of dealer activity on a large scale in India, also because of the absence of loans to dealers by banks and other financial institutions to any significant extent, and due to the lack of interest in government securities by companies, there has not been much danger until very recently to monetary policy in India from a similar development. There have been attempts in the recent past to spread the cult of investment and trading in the gilts through portfolio management, buy-back dealings, repos and so on among banks and other non-captive clients. Buy-back or repurchase agreements in GOI dated securities have been provided to a few institutions which keep their accounts exclusively with the RBI and do not earn any interest on the balances maintained with it. The institutions can invest their temporary surplus funds by purchasing government securities from the RBI at ruling rates, and can unload the same to the RBI whenever needed at the original rate so that they do not suffer capital loss. Many policy changes have been initiated in the recent past which might ease the 'government securities market constraint' on the flexibility in using different techniques of monetary control, and on the effectiveness of monetary policy. The policy of developing the institutional infrastructure of the GSM, reducing the SLR, and raising interest rates on government securities and making them market-related might transform the GSM from being a constraint to being an aid to the effective conduct of monetary policy.

18.6 CORPORATE BOND MARKET

LO 6

Review the corporate bond market in India

Corporate debt is a security issued by a corporation and sold to investors. The backing for the bond is usually the payment ability of the company, which is typically money to be earned from future operations. In some cases, the company's physical assets may be used as collateral for bonds. Corporate bonds are considered higher risk than government bonds. As a result, interest rates are almost always higher, even for top-flight credit quality companies. The major issuers of corporate bonds in India are private sector companies, public sector undertakings, financial institutions, banks and medium and small companies. The main investors in the corporate bond market are banks, insurance companies, provident funds and mutual funds. Mutual funds are primary investors in short dated paper and their investment pattern is primarily guided by growth of asset under management. Life insurance players on the other hand are buyers of long-tenure paper given their asset liability structure and constant stream of renewal money. Banks investment in debt market is primarily in sovereign securities guided by mandatory SLR requirements. FII as an investor category has constantly seen increase in opening up of limits for corporate bonds by SEBI. The corporate debt market is primarily regulated by three institutions namely the Reserve Bank of India, the Securities and Exchange Board of India and the IRDA.

Table 18.9 Classification of corporate bonds in India

Based on issuer	*Based on maturity*	*Based on coupon*	*Based on option*	*Based on redemption*
Issued by corporates	**Short-term:** *Maturity* period less than 1 year	**Zero coupon bonds:** No coupons are paid. The bond is issued at a discount to its face value, at which it will be redeemed.	**Put option:** This feature gives bondholders the right but not the obligation to sell their bonds back to the issuer at a predetermined price and date. These bonds generally protect investors from interest rate risk.	**Single redemption:** In this case, principal amount of bond is paid at the time of maturity only.
Issued by banks	**Medium term:** Maturity period between 1 and 5 year.	**Fixed coupon:** Coupon rate that remains constant throughout the life of the bond.	**Call option:** This feature gives a bond issuer the right, but not the obligation, to redeem his issue of bonds before the bond's maturity at predetermined price and date.	**Multiple redemption/ Amortizing bond:** A bond, in which payment made by the borrower over the life of the bond, includes both interest and principal, is called an amortizing bond.
Issued by Public Sector Undertakings	**Long Term:** Maturity period more than 5 years	**Floating coupon:** Coupon rates are reset periodically based on benchmark rate		
Issued by Local Bodies	**Perpetual:** no Maturity			

18.6.1 Importance of Corporate Bond Market

A sound bond market with a significant role played by the corporate bond market segment is considered to be important for an efficient capital market. The corporate bond market ensures that funds flow towards productive investments and market forces exert competitive pressures on lending to the private sector. From the perspective of developing countries, a liquid corporate bond market can play a critical role in supporting economic development. It supplements the banking system to meet the requirements of corporate sector for long-term capital investment and asset creation. It provides a stable source of finance when the equity market is volatile. Further, with the decline in the role of development financial institutions (DFIs), there is an increasing realisation of the need for a well-developed corporate debt market as an alternative source of finance. While India boasts of a world class equity market, its bond market is still underdeveloped as compared to other Asian countries (*e.g.* South Korea). The Asian financial crisis of 1997–1998 brought to the forefront the limitations of even a well-managed, regulated and supervised banking system in countries such as Hong Kong and South Korea. The crisis clearly showed that banking systems cannot be the sole source of long-term investment in an economy. In this context, Jiang, Tang and Law (2002) point out that one of the principal benefits of a well-developed corporate bond market is to provide an effective alternative source of financing to bank financing. Further, they list the following important advantages of bond financing over bank financing.

1. Bank financing and corporate bonds deal differently with information asymmetries. While bond financing involves spreading credit risk over a large group of diverse bondholders, banks tend to minimise credit risks of borrowers and manage their risks by monitoring borrowers.
2. Bank financing involves maturity transformation as liabilities of banks are typically short-term in nature and assets have longer maturities whereas in bond financing, investors are fully aware of the yields and time horizons of their investments.
3. Bond market provides a yield curve or a market-determined term structure of interest rates. The yield curve serves as a benchmark for pricing credit risk and other financial products.
4. Bond financing lowers funding cost for high quality borrowers as intermediation costs are lower for bond financing than for bank financing.
5. A well-developed bond market introduces a healthy competition with the banking sector in providing corporate financing.
6. Bond market allows pooling of risks through securitisation [such as mortgage-backed (MBS) or asset-backed securities (ABS)].
7. A well-developed corporate bond market increases economic welfare as it complements other financial instruments and provides a full spectrum of investment vehicles whose payoffs across contingencies or states of nature cannot be easily replicated by other securities in the market (e.g. pension funds and insurance companies like to hold low-risk debt instruments, with a stable income stream, which, in general, are not provided by the equity market).
8. Bond market helps in spreading the risk among ultimate savers rather than get concentrated in the intermediaries.

18.6.2 Challenges to Corporate Bond Market in India

The factors which hinder the development of corporate bond market in India are as follows:

- The strong presence of development financial institutions, state-owned banks and commercial banks has led to low interest rates and easy access to capital for most firms, making public placement of bond more expensive and less attractive.
- Corporations prefer bank loans due to the prevalence of the cash credit system in the banks in which the cash management of the corporations is actually done by the banks.
- Companies also find it less expensive and less cumbersome to privately place debt issue than public placement. This has led to a lack of transparency and information about the corporate bond market, making the corporate bond market more risky and less attractive to most investors.
- Corporate demand for genuine bond finance is limited and companies have preferred bank loans to bond financing.
- Private placement tends to dominate the corporate bond market in India. In the primary market, nearly 90 percent debt is raised through private placement, which limits the quantum of bonds available for circulation and trading in the secondary market. The reason for this include lack of adequate participation in the public issue and relatively stringent regulatory requirements associated with public issues that entails costs and time on the part of the issues and borrowers of debt.

- These markets are seen to be dominated by NBFCs and other financial institutions, which further make it difficult for corporate, especially those who do not enjoy high credit rating to source funds from public bond issues.
- The secondary markets for corporate bonds are constrained by the lack of liquidity and transparency.
- The investor base is very limited in this market. The institutional investors such as banks, insurance companies and pension funds dominate this market. All these players are typically long-term investors who buy and hold the bonds and do not enter the secondary market. Retail investors are almost absent in this market due to the lack of awareness, knowledge and understanding of bonds as an asset class.
- The limited investor base for corporate bonds can also be attributed to the investor preferences for government securities as the supply of government securities are rare and it is mandatory for financial institutions to invest certain percentage of their money in this market. Therefore the government sector crowds out the investment from the private sector.
- There are also certain regulatory restrictions that curtail investments of institutional investors in the corporate bond markets. For example bonds are not permitted to invest in below investment grade securities and the insurance and pension firms are also constrained by various norms that stipulate their investment in government bonds.
- There is limited market infrastructure in this market in comparison to government securities market. Therefore participants have limited access to this market for better pricing and trading.
- A standard stamp duty rate across the country is absent and there is charging of TDS on corporate bonds.
- Indian corporate debt market does not have market makers who could add diversity to the market.
- There is lack of development of associated derivative market, such as credit default swap (CDS), interest rate futures (IRF). These derivative instruments serve as tools to hedge against market risks and credit risks in the underlying market.
- The repo rate in corporate bond has also developed in India. This can be attributed to lack of broad-based institutional participation and legalities associated with signing of agreement.
- The corporate debt restructuring scheme introduced by RBI for protection of debt investor in case of bankruptcy has not been very effective in reviving the corporate bond market as foreign lenders are not covered under the scheme.
- The different tax rates are applied depending on the end buyer of the bond. Insurance companies and mutual funds are exempt from taxes; however, banks and corporate are taxed.
- Banks prefer to issue loans than buying bonds of corporate as the banks receive higher interest rate on loans and are protected under tight bankruptcy norms.
- Foreign investors are allowed in the market only to a very limited extent.

18.6.3 Patil Committee (2005) and Raghuram Rajan Committee (2009) Recommendations to Develop the Corporate Bond Market

Various committees have been constituted in the recent years to study and develop the corporate bond market. In 2005, a high level expert committee on corporate bonds and securitisation (Patil Committee) was set up under the chairmanship of Dr. R.H. Patil to examine the legal, regulatory, tax and market design issues in the development of corporate bond market. The committee then recommended two broad set of reforms. The first set of reforms was aimed at removing the hurdles that the debt market faces in terms of regulation of the

securities market as well as tax treatment of debt securities. The second set of reforms was aimed at proactive steps to enlarge the issuer base and to develop the secondary market institutions in the corporate bond market. Further Raghuram Rajan Committee on Financial Sector Reforms (CFSR) in 2009 has also recommended certain policies to develop the corporate bond market in India.

Recommendations of Patil Committee (2005)

1. Development of Primary Market

- Rationalise stamp duty structure across the country and fix stamp duties based on tenor and issuance value.
- Eliminate tax deducted at source (TDS) for corporate bonds in line with government securities.
- Enhance the issuer base by encouraging corporations to borrow from the bond market rather than from banks.
- Develop market makers in the corporate bond market similar to the primary dealers in the government bond market. Investment banks and banks can be encouraged to be market makers.
- Enhance the scope of investment by provident/pension/gratuity funds and insurance funds in corporate bonds. Make bond ratings the basis for such investments rather than the category of issuers. Encourage retail investor participation through stock exchanges and banks. Increase foreign investment limits for corporate bonds to encourage foreign investor participation.
- Consolidate issue of privately placed bonds. Avoid fragmentation or multiple numbers of issues to improve liquidity and depth in the market. This is also expected to favour public issues over private placement.
- Create a primary issuance database to provide information to investors to make a valued decision. Information on credit rating and credit migration should also be provided as part of the database.

2. Development of Secondary Market

- Use the existing infrastructure of national stock exchanges to establish a system to capture all the information related to trading in corporate bonds and disseminate it to the market in real time.
- SEBI should set up a separate trading platform for institutional investors in line with bond market as in other countries.
- Reduce shut periods and adopt a unified convention of day count for corporate bonds.
- Introduce exchange traded derivatives to provide ways to hedge risk of holding physical bonds.
- Reduce the minimum market lot for corporate bonds from 10 lakh to 1 lakh to encourage participation of retail investors.
- The secondary market for asset-backed securitisation products does not exist as these instruments cannot trade in the stock exchanges. Legal and regulatory issues need to be sorted out to facilitate growth of securitisation. The existence of secondary market for securitisation would help transfer risks by repackaging loans and selling them as bonds such as mortgage-backed (MBS) and asset-backed securities (ABS).
- There is a need to create specialised long-term debt funds to cater to the needs of infrastructure development. This will enable larger volumes of debt financing to flow to infrastructure projects and help distribute risks across diverse projects.

Recommendations of Raghuram Rajan Committee (2009)

- Reforms in the corporate bond market cannot be considered in isolation and should be a part of the overall financial sector reforms and should be consistent across a number of policy areas. It is important to create a number of missing markets such as exchange traded interest rate and foreign exchange derivatives contracts to revive the corporate bond market.
- Allow domestic financial institutions greater flexibility to invest in corporate bonds.
- Reduce transaction costs in issuing and trading corporate bonds.
- Bring all regulation of trading under the Securities and Exchange Board of India (SEBI). Agencies, however, should continue to cooperate in areas where multiple regulators share concerns about a market. Supervision of all deposit-taking institutions must come under RBI.
- Reduce the artificial preference for banks loans by subjecting loans and bonds to similar mark-to-market requirements.
- Set up a working group on financial sector reforms with the Finance Minister as the chairman to monitor progress on financial sector reforms (to include the implementation of the recommendation of various committees) and to initiate needed actions.

18.6.4 Policy Measures Taken to Develop the Corporate Bond Market[9]

A number of policy initiatives were taken during the 1990s to activate the corporate debt market in India. In 1992, government abolished the ceiling on the interest rate that erstwhile Controller of Capital Issues used to stipulate for issuance of corporate debentures. In 1994, NSE started trading in debt instruments through its WDM segment. However, WDM has been mostly used as a reporting platform for the deals on the OTC market. The WDM segment of BSE commenced operations in 2001. Although the reforms timeline in corporate bond market in India started in 1992, it has picked up pace only in last 5–6 years after the recommendation of Patil Committee (2005).

- The Government of India in January 2007 clarified the regulatory jurisdiction of different agencies in order to provide for the smooth development of the corporate bond market by avoiding conflicts arising from the involvement of multiple organisations in their regulations. Accordingly, it was decided that SEBI would be responsible for primary market (public issues as well as private placement by listed companies) as well as secondary market (OTC and Exchange-traded) for corporate debt whereas RBI will be responsible for the market for corporate repos and reverse repos. However, if repos or reverse repos are traded on exchanges, trading and settlement procedures would be determined by SEBI.
- In May 2009 in order to simplify the requirements for debt securities, SEBI put in place the simplified listing for debt securities. According to the new listing requirements, issuers with listed equity, who are already subject to detailed disclosure requirement, have to make now only minimal disclosures. In July 2009, SEBI issued a circular to all mutual funds, AMFI, stock exchanges and FIMMDA for making it mandatory to report inter-scheme transfers of corporate bonds by mutual funds on either of the reporting platforms of BSE, NSE or FIMMDA.

[9]Raghavan, S *et al*. (2014), *A Study of Corporate Bond Market in India: Theoretical and Policy Implications, Development Research Group*, Study No. 40, RBI.

- Union Budget 2008–2009 had announced exemption of tax deduction at source (TDS) for corporate bond instruments issued in demat form and listed on recognised stock exchanges in order to implement the recommendations of the Patil Committee on corporate bond market that TDS rules for corporate bonds should be similar to the ones applicable to government securities.
- SEBI mandated that all regulated entities report trades on the reporting platform of exchanges. Currently, the secondary market trades in corporate bonds are being reported on the FIMMDA platform. Further, in order to create a centralised database for corporate bonds, a system to capture secondary market trades was set up by the exchanges and the new issuance data is now being captured by the National Stock Exchange (NSE) and the Bombay Stock Exchange (BSE).
- In order to encourage participation of retail investors, SEBI reduced trade lot size for all classes of investors from ₹10 lakh to ₹1 lakh.
- With the aim of developing a transparent and efficient secondary market for corporate bonds, SEBI issued a circular on 13 April, 2007 providing for a policy framework for trading, clearing and settlement for corporate bonds including anonymous trading. The limits as well as foreign investor base for government and corporate bonds have been gradually enlarged.
- SEBI had *vide* its circular dated 16 October, 2009 informed the stock exchanges to undertake the clearing and settlement activity of trades in corporate bonds through the clearing corporations. SEBI had earlier authorised BSE, NSE and FIMMDA to set up and maintain reporting platforms to capture information related to trading in corporate bonds. Subsequently, SEBI authorised BSE and NSE to set up and maintain trading platforms for corporate bonds. It had been decided that all the trades in corporate bonds between specified entities, namely, mutual funds, foreign institutional investors/sub-accounts, venture capital funds, foreign venture capital investors, portfolio managers, and RBI-regulated entities as specified by RBI would be cleared and settled through the National Securities Clearing Corporation Limited (NSCCL) or the Indian Clearing Corporation Limited (ICCL) from 1 December, 2009. This would be applicable to all corporate bonds traded over the counter (OTC) or on the debt segment of stock exchanges.
- The Reserve Bank issued guidelines on 8 January, 2010 under section 45W of the RBI Act, 1934 to introduce repo in corporate bonds. Taking into consideration the experience gained, the Reserve Bank has permitted repo in corporate debt on commercial papers, certificates of deposits and non-convertible debentures of less than 1 year of original maturity with effect from 7 January, 2013. The minimum haircut applicable on the market value of the corporate debt securities has been revised by the Reserve Bank in the range of 7.5 to 10 percent for AAA to AA-rated corporate bond.
- RBI has recently decided to implement the guidelines relating to introduction of CDS effective 1 December, 2011. All CDS trades will be required to be reported to a centralised trade-reporting platform, and in due course they will be brought on a central clearing platform. The launch of CDS could help in the development of corporate bond market, as it provides a hedging opportunity for both residents as well as FIIs.
- Effective 7 January, 2013 the Reserve Bank has permitted CDS on unlisted but rated corporate bonds even for issues other than infrastructure companies. Further, CDS have been permitted on securities with original maturity up to 1 year such as commercial papers, certificates of deposits and non-convertible debentures with original maturity less than 1 year.

- Though equity indices such as Nifty 50 and the BSE Sensex index have existed for a long time and serve as popular benchmark for equities, designing debt indices has posed challenges in India as the breadth and depth of the debt market is shallow. However, market participants need a debt index to compare their performance as well as the performance of different asset classes. A widely tracked benchmark in this context is the ICICI securities (ISEC) bond index (I-Bex) which measures performance of the bond market by tracking returns on government securities. The index has two variants namely a principal return index (PRI) and total return index (TRI). There are also other indices such as the NSE's G-Sec Index and the NSE's T-Bills Index.
- Multiple measures are taken to attract investment from FIIs that are as follows: (i) FII investment limit in corporate bonds has increased to USD 51 billion. (ii) Withholding tax rates on investments in debt instrument have declined from 20 to 5 percent. The benefit of lowering withholding tax on interest income to be made applicable irrespective of the time when the bonds were bought. (iii) The government has permitted FIIs to apply without the need of PAN card for long-term infrastructure bonds.

18.6.5 Development of Corporate Bond Market in India

The **primary corporate market**, which comprises the public issues and the private placement market, is a major source of fund for the corporates and an avenue for investment of surplus funds by the investors. Tables 18.10–18.12 show the development of primary corporate market during 1990–1991 to 2014–2015. The contribution of corporate debt market to total private corporate sector capital formation has been varying between 0.05 and 19 percent. It has been highest in the year 1992–1993 and gradually it declined to 0.05 percent in the year 2005–2006, but again it has revived and increased to 12.03 percent in the year 2013–2014. This particular pattern can be attributable to the relative development of corporate bond market against the equity market and government securities market (Table 18.10). From Table 18.11, it is evident that **t**here was a preference for raising resources in the primary market through debt instruments, and the private placement of debt emerged as the major route for raising resources. Table 18.12 shows the development of private placement of corporate debts. It has been continuously increasing in terms of number of issues and total amount of transactions during 2007–2008 to 2012–2013. Only in the year 2013–2014, it has slightly declined.

Table 18.10 New debts issued by non-government public limited companies

Year	*Debts*		*2 as % of Gross Capital Formation of Private Corporate Sector*
	No. (1)	*Amount (₹ in crore) (2)*	
1990–1991	115	3015	12.03
1991–1992	145	4275	10.81
1992–1993	171	9850	19.19
1993–1994	149	9370	18.11
1994–1995	121	8871	11.90
1995–1996	63	3970	3.26
1996–1997	32	4233	3.54

(*Contd.*)

1997–1998	12	1972	1.50
1998–1999	12	2391	1.97
1999–2000	10	2401	1.71
2000–2001	9	3068	2.88
2001–2002	13	4832	3.99
2002–2003	4	1418	0.98
2003–2004	3	1251	0.67
2004–2005	3	1627	0.49
2005–2006	2	245	0.05
2006–2007	3	850	0.14
2007–2008	2	809	0.09
2008–2009	1	1500	0.24
2009–2010	4	2680	0.34
2010–2011	6	2626	0.26
2011–2012	14	7528	0.82
2012–2013	6	2217	0.24
2013–2014	17	5869	12.03

Source: RBI Handbook of Statistics on Indian Economy, 2014.

Table 18.11 Resources raised by corporate sector

Years	*Percentage share in the total resource mobilisation (%)*			
	Public equity issue	*Right issue*	*Debt public issue*	*Debt private placement*
2000–2001	4.20	—	7.01	88.79
2001–2002	2.06	—	10.15	87.80
2002–2003	1.92	—	8.67	89.42
2003–2004	25.25	—	6.13	68.62
2004–2005	26.55	—	5.07	68.37
2005–2006	22.44	—	0.00	77.56
2006–2007	21.30	—	0.00	78.70
2007–2008	26.0	16.2	0.5	57.4
2008–2009	1.1	6.6	0.8	91.5
2009–2010	18.9	3.4	1.0	76.7
2010–2011	18.7	3.7	3.6	74.0
2011–2012	3.5	0.8	11.9	83.9
2012–2013	1.7	2.3	4.4	91.6
2013–2014	2.7	1.4	13.0	83.0
2014–2015	0.7	1.5	2.1	95.7

Source: Indian Securities Market—A Review, Various Issues.

Table 18.12 Private placement of corporate debt reported to BSE and NSE

Year	NSE		BSE		Common		Total	
	No. of issues	Amount (crores)	No. of issues	Amount (crores)	No. of issues	Amount (crores)	No. of issues	Amount (crores)
2007–2008	580	90718	120	11711	44	16056	744	118485
2008–2009	699	124810	285	17045	57	31426	1041	173281
2009–2010	647	143286	597	49739	34	19610	1278	212635
2010–2011	774	153370	591	52591	39	12825	1404	218785
2011–2012	1152	189803	783	56974	18	14505	1953	261282
2012–2013	1295	206187	1094	72474	100	82801	2489	361462
2013–2014	837	140713	997	78805	12	56536	1924	276054

Source: SEBI, Bulletin, May 2014.

Table 18.13 Trading in corporate bonds

Years	BSE		NSE		FIMMDA		Grand Total	
	No. of trades	Amount (crores)	No. of trades	Amount (crores)	No. of trades	Amount (crores)	No. of trades	Amount (crores)
2007–2008	11203	40957.56	3787	31453.14	4089	23479.01	19079	95889.71
2008–2009	8327	37320.47	4902	49505.39	9501	61534.84	22730	148360.7
2009–2010	7408	53323.50	12522	151920.00	18300	195954.55	38230	401198.04
2010–2011	4465	39581.09	8006	155951.23	31589	409741.92	44060	605274.24
2011–2012	6424	49842.00	11973	193435.00	33136	350506.00	51533	593783.00
2012–2013	8639	51622.00	21141	242105.11	36603	444904.15	66383	738632.00
2013–2014	10187	103027.0	20809	275701.00	NA	NA	NA	NA

Source: SEBI, Bulletin, May 2014.

The movement in the *secondary corporate bond market* is shown in Table 18.13. The data on corporate bonds at the NSE and the BSE includes the trades on the respective trading systems as well as the reports of the trades carried out in the OTC market. The volumes of the trades on the NSE, BSE and FIMDA have increased continuously, which show the growing importance of the secondary corporate debt market in India, but still it has not kept the pace with the development of secondary equity market.

18.7 DEVELOPMENT OF PUBLIC SECTOR UNDERTAKING (PSU) BOND MARKET

LO 7

Explain the Public Sector Undertaking (PSU) bond market in India

PSU bonds are medium- or long-term debt instruments issued by public sector undertakings (PSUs). The term usually denotes bonds issued by the central PSUs (i.e. PSUs funded by and under the administrative control of the Government of India). Most of the PSU bonds are sold on private placement basis to the targeted investors at market determined interest rates. Often investment bankers

are roped in as arrangers to this issue. Most of the PSU bonds are transferable and endorsed at delivery and are issued in the form of Usance Promissory Note. PSU bonds are issued in demat form. In order to attract the investors and increase liquidity, issuers get their bonds rated by rating agencies such as CRISIL, ICRA, CARE and so on. Some of the issues may be guaranteed by central/state government enabling them to get a better rating. The bonds may carry call/put option. PSUs issue these bonds for their regular working capital needs and long-term investments also. Many companies issue these types of bonds in India. These include India Infrastructure Finance Company, Indian Railway Finance Corporation, Power Finance Corporation, National Highway Authority of India, Housing and Urban Development Corporation, Rural Electrification Corporation, National Thermal Power Corporation, NHPC, Airport Authority of India and so on. The maturity of PSU bonds varies between 5 and 10 years. The default rates of PSU bonds are negligible and they are perceived as quasi sovereign bonds. The bonds issued by PSUs are of two types*, viz.,* taxable and tax-free. The provisions of tax-free bonds as contained in Section 10(15)(iv)(h) of IT Act allows complete exemption of interest income arising from notified PSUs bonds. For tax-free bonds, normally such bonds accompany post-dated interest cheque/warrants. In the pre-reform period the maximum interest on taxable bonds was 14 percent and for tax-free bonds it was 10 percent. During the post-liberalization period, the ceiling on the interest rates has been removed for taxable bonds and for tax-free bonds, it has increased to 10.5 percent. The major investors in PSU bonds are banks, mutual funds, insurance companies, provident funds and individuals.

Table 18.14 reveals that total amount of bonds issued by public sector units have increased during 1991–1992 to 2000–2001, further up to 2005–2006 it has shown a declining trend. During the period 2006–2007 to 2011–2012, it has grown in a significant manner and afterwards it has shown a slight declining trend. Among the taxable and tax-free bonds the taxable bonds have been more popular than the tax-free bonds and during the period 2003–2004 to 2008–2009 the issuance of tax-free bonds were discontinued and further it has been started from 2009–2010 and since then it has been increasing continuously.

Table 18.14 Bonds issued by public sector undertakings (₹ in crore)

Year	*Tax-free bonds*	*Taxable bonds*	*Total*
1991–1992	2469	3422	5891
1992–1993	11	1052	1063
1993–1994	1414	4172	5586
1994–1995	1198	1872	3070
1995–1996	547	1744	2291
1996–1997	67	3327	3394
1997–1998	570	2412	2982
1998–1999	406	3957	4363
1999–2000	400	8297	8697
2000–2001	662	15969	16632
2001–2002	274	14162	14436
2002-2003	286	7243	7529
2003-2004	—	5443	5443
2004–2005	—	7541	7541

(*Contd.*)

2005–2006	—	4846	4846
2006–2007	—	10325	10325
2007–2008	—	13404	13404
2008–2009	—	20546	20546
2009–2010	1926	46483	48409
2010–2011	1642	58791	60433
2011–2012	28082	59983	88065
2012–2013	14860	37857	52717
2013–2014	34244	16621	50865

Source: RBI, Handbook of Statistics in Indian Economy, 2014.
Notes: (1) Data for 2013–2014 are provisional. (2) The data for the table include both public issues of bonds and privately placed bonds.

SUMMARY

- The coupon, maturity, principal and the ownership are the important features of a bond.
- The bond market in India consists of mainly two categories—the government securities comprising central government and state government securities, and the corporate bond market.
- Dated government securities are long-term securities and carry a fixed or floating coupon (interest rate) paid on the face value, payable at fixed time periods (usually half-yearly).
- The tenor of dated securities can be up to 30 years.
- The broad, well-functioning, well-developed GSM provides flexibility to the authorities in their task of debt management.
- Major players in the government securities market include Reserve Bank of India, commercial banks and primary dealers besides institutional investors such as insurance companies.
- The investors in this market can be classified into different segments such as (i) wholesale market which comprises the players such as banks, financial institutions, insurance companies, primary dealers and mutual funds, (ii) middle segment comprising corporate, provident funds, non-banking financial companies and co-operative banks, and (iii) retail segment consisting of individuals and non-institutional investors.
- Government securities may be held by investors either as physical stock or in dematerialized form. From 20 May, 2002, it is mandatory for all the RBI-regulated entities to hold and transact in government securities only in dematerialized (SGL) form.
- In the primary GSM, the dated securities are issued and priced through the auction process for a better price discovery.
- The securities can be traded in the secondary market either through (i) over the counter (OTC) or (ii) through the negotiated dealing system (NDS), and (iii) stock exchanges.
- Transactions undertaken between market participants in the OTC/telephone market are expected to be reported on the NDS platform within 15 minutes after the deal is put through over telephone.
- The settlement cycle for dated security auction is $T + 1$.

- All the transactions are settled through delivery *versus* payment (D*v*P) system. D*v*P is the mode of settlement of securities wherein the transfer of securities and funds happen simultaneously.
- Sovereign Gold Bonds are government securities denominated in grams of gold. They are substitutes for holding physical gold. Investors have to pay the issue price in cash and the bonds will be redeemed in cash on maturity.
- The percentages of central government market borrowings to total borrowings have been quite higher than the state governments' market borrowings.
- The RBI does not hold any state government securities; its ownership of the central government securities has declined over the years. Commercial banks and Life Insurance Corporation of India (LIC) continue to hold the largest share of government stocks.
- The weighted average coupon rate (WACR) on central government securities has been showing a volatile trend in the current period.
- The secondary market in state government securities is very small compared to the market for central government securities. The trading pattern of government securities indicates that most of the trading activity takes place in central government securities.
- The major issuers of corporate bonds in India are private sector companies, public sector undertakings, financial institutions, banks and medium and small companies.
- The main investors in the corporate bond market are banks, insurance companies, provident funds and mutual funds.
- Indian corporate debt market does not have market makers who could add diversity to the market.
- The volumes of the trades of private corporate bonds on the NSE, BSE and FIMDA have increased continuously, which show the growing importance of the secondary corporate debt market in India, but still it has not kept the pace with the development of secondary equity market.
- PSU bonds are medium- or long-term debt instruments issued by public sector undertakings (PSUs).These include India Infrastructure Finance Company, Indian Railway Finance Corporation, Power Finance Corporation, National Highway Authority of India, Housing and Urban Development Corporation, Rural Electrification Corporation, National Thermal Power Corporation, NHPC, Airport Authority of India and so on.
- The maturity of PSU bonds varies between 5 and 10 years.
- The major investors in PSU bonds are banks, mutual funds, insurance companies, provident funds and individuals.

KEY TERMS

Coupon
Par value
Bearer bond
Registered bond
Credit risk
Interest rate risk
Corporate bond
PSU bonds
Yield curve
Primary dealer
Subsidiary Ledger Account
Gilt Account
Over the counter market
Negotiated dealing system
Wholesale debt market
Delivery versus payment system
Zero coupon yield curve
Zero coupon bond

Inflation risk
Liquidity risk
Call risk
Government securities market
Price-based auction
Yield-based auction
Competitive bidding
Non-competitive bidding
Sovereign gold bond
When issued market
Uniform price
Multiple price

QUESTIONS

1. What are the intrinsic features of a bond?
2. What are the various types of risks involved in bond investments?
3. Why government securities market (GSM) is important?
4. Explain the different strategies used to make the GSM liquid.
5. Give a synoptic view of the existing structure and organization of dated GSM in India.
6. What is yield curve? How the yield curve of GSM can be used as a public good?
7. With a suitable example the yield-based and price-based auction of the GSM.
8. Explain the market structure of the secondary GSM in India.
9. What are the major policy measures taken to develop the GSM in India?
10. The ownership pattern of GSM has changed during the last two decades. Justify.
11. Has the maturity pattern GSM changed? Answer this with evidence.
12. Write a note on the interest rates on central and state government dated security.
13. Is there any conflict between the objectives of debt management and maturity policy? Explain it through the GSM.
14. Highlight the structure, development and importance of corporate bond market in India.
15. What are the challenges to corporate bond market in India?
16. Write the short notes on the following
    (i) Price–yield relationship
    (ii) Competitive bidding
    (iii) Over the counter market
    (iv) Delivery versus payment system
    (v) STRIP
    (vi) When issued market
    (vii) Sovereign Gold Bond Scheme
    (viii) PSU bonds

17. Assume 10 percent coupon paying bond of 20 years maturity. The par value of the bond is ₹1100 and payments are made semi-annually. The bond is priced at ₹1125.50 when it has 12 years remaining until maturity. Compute the following:
    (a) Its yield to maturity
    (b) Nominal yield
    (c) Current yield
    (d) Its yield to call if the bond is callable in 3 years with 8 percent premium.
18. Given a 10-year, 10 percent coupon paying bond with a face value of ₹2000 and coupon payments are made annually, determine its value for the following yields: 8 percent, 6 percent, 10 percent and 15 percent. Comment on the price–yield relation that you observe. What are the percentage changes in the value when the yield changes from 10 to 8 percent, 6 percent and 15 percent.
19. Given a 7-year, 8 percent coupon bond with a face value of ₹1000 and trading at a simple annual rate of 9 percent, determine the values and effective annualized rates given the bond has following payment or compounding frequencies:
    (i) Semi annual
    (ii) Continuously
20. Suppose a company issued a bond of 8 percent annual coupon payment, face value of ₹1500 and of the maturity 5 years. The current YTM is 10 percent. It is expected that the Reserve Bank of India will tighten credit policy and may increase the yield up to 50 basis points. Determine today's price and expected price.
21. Estimate the YTM of 20-year, 10 percent coupon paying bond with a face value of ₹2000, annual coupon payments and current price as ₹1200. Find out the value of the bond using the estimated YTM.

Stock Market

19 CHAPTER

Learning Objectives

- **LO 1** Know the case for and against the role of equities market
- **LO 2** Explain the types of market segments in the stock markets, securities traded and valuation techniques of stocks
- **LO 3** Understand primary market
- **LO 4** Discuss secondary equity market
- **LO 5** Explain market microstructure in Indian stock market
- **LO 6** Describe major policy developments in equity market in India
- **LO 7** Review the measures to develop equity market
- **LO 8** Show the drawbacks of the Indian stock markets

19.1 INTRODUCTION

The objective of this chapter is to discuss various aspects of the working of the stock market in India with special reference to recent developments and policy initiatives. The term stock market can be used to denote individual stock exchanges at various places or one market comprising all individual stock exchanges in the country. The stock market or equities market, occupies a disproportionately large space in the discussions in the print and electronic media. The industry, business, rich and middle classes tend to be highly preoccupied with this market, and regard it as the barometer of the health of the economy. They frequently stress the essentiality of the growth and spread of what has come to be called the equity culture or equity cult or risk capital for faster industrial growth. The chapter, therefore, begins with the discussion of the theory of equity culture, that is, the case for and against (the over-emphasis on) the role of equities market.

19.2 THEORY OF EQUITY CULTURE

LO 1
Know the case for and against the role of equities market

The advocacy of the equity culture is rather vague. Quite often, the benefits of the stock market which are stressed are more from the point of view of maximising (speculative) returns for the individual investors and the market operators, and the issue of how far it helps the corporate sector in raising fresh capital is side-

tracked. Recently, many articles discussing the relationship between stock market and economic growth have appeared in international journals, *viz*., World Bank Economic Review and World Bank Research Observer. But unfortunately, most of them have overwhelmingly emphasised the secondary market (SM) indicators and have not even mentioned primary market activity. They have assessed the role of stock markets in developing countries mainly in terms of the secondary market turnover, the market capitalisation, the benefits they offer to international investors, their integration with the international markets and so on. We shall first bring together various arguments in favour of equity culture and then show how and why they are unconvincing.

19.2.1 The Case for Equity Culture

(a) The capital market serves as a reliable guide to the performance and financial position of companies, and thereby promotes efficiency. It values firms accurately and ties up manager compensation to stock values and thereby provides incentives to managers to maximise firm value. It thus helps to align the interests of the owners and managers and thereby spurs efficient resource allocation and growth.

(b) A near continuous valuation of companies as reflected in share prices, and the implied possibility of mergers and takeovers are conducive to financial discipline and more efficient allocation of capital.

(c) Stock market promotes growth through the creation of liquidity. Many profitable investments require long-term capital, but investors are often reluctant to relinquish control over their savings for long periods. Equity market makes investment less risky, more profitable and more attractive by making it more liquid. By facilitating long-term and more profitable investments, liquid stock market improves the allocation of capital and enhances growth. Through these effects, the stock market liquidity can lead to more saving and investment also.

(d) Historically, many inventions had been made much before they became innovations. Inventions became innovations and ignited industrial revolution when liquid financial markets made it possible to develop projects that required large capital injections for long periods. The industrial revolution had to wait till the financial revolution took place.

(e) Since high-return projects tend to be comparatively risky, stock markets that facilitate risk diversification through international integration can encourage a shift to higher return projects, and thereby help to promote growth.

(f) Large, active, and liquid stock markets induce investors to research and monitor firms, and the resulting improved information improves resource allocation and accelerates growth.

(g) Stock markets attract foreign investment; they act as conduits for foreign savings. The inflow of foreign equity brings in improved accounting and reporting standards in its wake, and exposes domestic companies to advanced supervisory and managerial techniques.

(h) Inflow of foreign equity through stock market helps to avoid excessive reliance on debt, and saves firms from undue exposure to the debt-servicing burden. The substitution of equity finance for debt finance which stock markets render possible makes domestic firms less vulnerable to fluctuations in earnings and increases in interest rates.

(i) Debt finance or bank loans may not be available to some firms, that is, they may be available only to a select group of companies. Stock markets can help such companies to obtain equity finance.

Alternatively, if well-managed and well-established companies rely on stock markets, banks and financial institutions can provide greater assistance to new, small companies and to sectors other than the industrial sector.

(j) The ability to effect changes in the management of quoted companies can ensure that managerial resources are used efficiently. In other words, stock markets tackle the 'free rider' problem in a better way, that is, if individuals hold a small part of equity of any firm, they have little incentive to incur the costs of monitoring the management.

19.2.2 Examination of the Case for Equities[1]

(a) The liquidity advantage of the stock market has been disproportionately overplayed. Liquidity is only one of the motivating factors in savings and investment decisions; risk, return, maturity, and so on, are the other equally important and relevant considerations. The share market, as it is, is much more liquid than many other markets, and yet, the investment in shares is riskier than many other investments. Moreover, there are many other ways also to provide liquidity to the investors. Good facilities for premature retirement, and buy-back or repurchase facilities have made bank deposits and units quite liquid without their being traded on the stock market. Further, it is counter factual to say that the saving-investment process would break down or seriously suffer without liquidity. The overwhelming preference for debentures and a continued support to unquoted shares in India and elsewhere clearly suggests that the pre-occupation with stock market liquidity should be discarded. The reluctance of investors 'to relinquish control of their savings for long periods' is similarly counterfactual. The investor-community is large and diverse, and to argue that all or most or majority of investors prefer short-term to long-term investments is erroneous. If investors were reluctant to invest, then long, undated or long-term bonds would not have existed. The investors in India have generally preferred long-term to short-term claims; the maturity structure of bank deposits is a good example in this context. Finally, liquidity may encourage investor-myopia and weaken investor commitment; it may reduce investor incentive to exert corporate control and to monitor company performance, which can hurt economic growth.

(b) The corporate financing system based on equity finance displays a tendency to discourage long-term, riskier investments in productive physical capital as companies become preoccupied with short-term financial return to satisfy or please shareholders, and to avoid possible takeovers.

(c) The risk diversification through international integration is an attractive idea but it is easier said than done. It can also create or accentuate the problem of volatility rather than reduce risk and uncertainty.

(d) The active stock market, instead of inducing investors to research and monitor firms, quickly reveals information through price changes which tends to create a free-rider problem, that is, it reduces the incentive to exert and spend money for obtaining information.

(e) The argument regarding stock markets tying up the interests of managers and owners hinges on a very big 'if', namely, it results in the correct valuation of stocks. Actually, the stock market valuation of equities is often incorrect because it is not related to fundamentals (future real dividends and expected

[1]See also Classens, S, 'The Emergence of Equity Investment in Developing Countries: Overview', *The World Bank Economic Review*, January 1995; and Feldman, R A, and Kumar, M S, 'Emerging Equity Markets: Growth, Benefits, and Policy Concerns', *The World Bank Research Observer*, August 1995.

real interest rates, and so on), and is highly influenced by the speculative activity or trading. The efficient market hypothesis enshrined in the textbooks on finance is far away from reality. Further, managers hardly have any control over market valuation, and if they try to gain such a control, other ills such as 'insider trading' tend to afflict the stock market.

(f) The argument that stock market finance becomes handy to those firms which cannot access debt finance is a topsy-turvy one. Usually, it is the stock market finance to which many agricultural, small-scale borrowers and many joint-stock companies themselves are denied access. Banks and financial institutions are the normal, usual sources of funds to these entities.

(g) The idea of stock market as a promoter of allocative efficiency via mergers and takeovers is a dangerous idea. A healthy, sustained industrial activity can hardly be possible in an atmosphere where the constant threat of being swallowed or taken over by others exists. A system dependent on mergers and takeovers for the sake of being efficient is a doomed system. It assumes that the share market valuation is just and correct, and that it is always the efficient firms which absorb the less efficient firms. In practice, it has often been found that the real strength of the firms that take over others has been financial clout rather than higher efficiency. Tobin has rightly stressed that takeover bids are indicative of inefficiency.

(h) Another argument that the stock market attracts foreign equity and helps nations to lighten their debt servicing burden is also erroneous. The equity capital does not come free of cost. In fact, since equity investors expect a higher rate of return, it involves a higher servicing burden or a greater external drain of resources in the long run. In addition, there are problems of ownership and control which are associated with foreign equity. Its alleged advantage in terms of improved accounting, reporting, managerial and supervisory standards presumes that every equity-exporting country, be it the United States or a Middle-East country, has higher standards in this respect than every equity-receiving country. Even if one accepts such an assumption, there is no reason to believe that such standards would be applied in the case of equity capital but not in the case of debt capital.

(i) The stock market has been found to be far more speculative and volatile than the bond and commodity markets in developing as well as advanced countries. The speculative bubbles have often determined changes in equity prices, which has destabilised the economic systems from time to time. In today's liberalised and globalised economies, stock markets can easily act as conduits for spreading speculative pressures all over the world.

(j) The relationship between stock market activity and economic growth is very weak indeed. The case for equities has quite often been built up by appropriating for equities what really belongs to the financial system as a whole. Historically, the financial revolution which made industrial revolution possible included the development of banks and other financial intermediaries, and not merely that of the stock market. In fact, it is the former, more than the latter, which have catalysed industrial development in most countries. It may be recalled here that technical innovations and bank credit are the two pillars of growth in the Schumpeterian theory of development. Similarly, the relationship between the financial revolution and industrial revolution is symbiotic or interdependent rather than sequential as claimed by the advocates of equity culture.

The stock market cannot contribute much to the growth process because not much corporate investment is financed through the issuance of equity. Very little of the work of the securities industry as gauged by the volume of market activity has to do with the financing of real investment, or with the translation of savings into corporate investment.

Empirical evidence from a large number of both developed and developing countries overwhelmingly confirms the falsity of the view that 'the growth of risk capital is the kingpin of swift and efficient development of business and industry' in India. It is the commercial banks and term-lending institutions, and not the equities market, which have played an important role in industrialisation during the post-independence period in India. In Japan, the stock market remained underdeveloped even as the Japanese industry grew by leaps and bounds. In other industrialised countries such as the United States, UK, France, Canada, Germany and South Korea also, the share of equity finance in the total corporate finance has all along been rather low, and the growth of investment, industry and economy has not been dependent on the secondary markets. It has been found that in many countries, the underdeveloped stock market or absence of equity culture has had no adverse effect on savings and realised investment. The latest evidence also shows that the net contribution of stock markets to financing the needs of firms even in industrialised countries has been small. Equity financing accounted for less than 5 percent of the growth of net assets in these countries during 1980–1990.

19.3 CLASSIFICATION OF STOCK MARKETS AND SECURITIES

LO 2

Explain the types of market segments in the stock markets, securities traded and valuation techniques of stocks

A stock is a certificate representing partial ownership in a company. Stocks are issued by the companies that need long-term funds. There are two types of market segments in the stock market: (i) *primary market or new issue market* **(***NIM***)** and (ii) *secondary market* (*SM*). While the NIM supplies fresh or additional capital to the companies, the securities already issued or floated on the NIM are traded on the SM. The SM does not play any direct role in making funds available to the corporates; its role in this respect is only indirect, that is, it helps to encourage investors to invest in industrial securities by making them liquid, that is, by providing facilities for continuous, regular and ready buying and selling of those securities. NIM deals in new securities, whereas SM deals in already existing or old securities which have been listed on it. The investors acquire or buy securities directly from the companies on the NIM, while they trade securities so acquired among themselves on the SM. Business concerns raise capital through two major types of securities from the stock market. They are: (a) *ordinary shares* or variable dividend securities or common stock, and (b) *preference shares*. Ordinary shares and preference shares are also known as 'equities'. Unlike bank deposits and units, these securities are the major primary securities in the financial markets of any country. They differ in their investment characteristics and as such satisfy different preferences of various investors and enjoy differing degrees of popularity.

19.3.1 Ordinary Shares

Ordinary shares are ownership securities which have certain advantages in favour of the issuing companies and investors depending on their attitude to risk-taking. Investment in this financial instrument is permanent but not illiquid. Due to the existence of a fairly active secondary market in shares, investors can turn their share holdings into cash fairly quickly. Because of the high risk which he bears, the investor can participate in the earnings and wealth of the company without limit. In a period of inflation since the value of holdings increases, ordinary shares are expected to be a hedge against inflation. From the point of view of the company, it is advantageous because dividend payments on ordinary shares are not mandatory and there is no need

to refinance the capital raised through the issue of ordinary shares. As in other countries, this instrument is quite popular with individual investors in India. The face value of ordinary shares in India varies from ₹1 to ₹1000 but the most common and popular denomination of shares is ₹100. The ordinary share-holders are part owners of the company, and they have voting rights. But now, the authorities have decided to issue non-voting shares (NVS). Similarly, so far, it was not possible for companies to purchase their own shares on SEs. But now, they have been permitted to buy-back their own shares to a limited extent, and either to write off/cancel them or hold them as Treasury-frozen stock.

19.3.2 Preference Shares

A preference share is a complex financial instrument with a number of modifications to its general characteristics. Strictly speaking, it is an ownership security like an ordinary share, but carries a fixed rate of return (dividend) like a debenture. The holders of preference shares are entitled to income after the claims of creditors of the company have been met, but before ordinary shareholders receive any income. Because of these modifications, one comes across the following types of preference shares in the market: (a) cumulative and non-cumulative, (b) convertible and non-convertible, (c) redeemable and non-redeemable, and (d) participating and non-participating. On cumulative preference shares, if dividend is skipped in any period/ periods, it has to be paid subsequently. Convertible preference shares can be converted into ordinary shares on terms and conditions fixed at the time of issue of such shares. A redeemable preference share matures in a fixed period of time and for all practical purposes it is regarded as a debt security like a debenture. Participating preference shareholders can earn a higher dividend than the fixed one if the company makes good profits. Most preference shares in India are fixed-rate dividend shares with cumulative rights. Both redeemable and non-redeemable shares are in vogue in India, but many redeemable shares are so only at the discretion of the companies. Over a period of time, there has been a trend towards increasing the proportion of redeemable shares to total preference shares. The maturity period of redeemable shares is usually between 12 and 15 years. The practice of issuing preference shares with participation and conversion rights is not common. Preference shareholders have voting rights only on those issues which vitally affect the rights attached to their shares or when dividend has not been paid for a long period of time. The rate of dividend on these shares is subject to a ceiling fixed by the Controller of Capital Issues. The denomination of preference shares is known to vary between ₹1 and ₹1000, but the most common and popular one has been ₹100. In theory, a preference share offers a perfect certainty of income and, as such, is less risky. But the marketability and liquidity of preference shares are low in practice because the market for them is narrow and less active. The importance of preference share as a medium of investment for individuals has declined and now they are mostly held by institutional investors. Their relative importance as a method of financing for companies has also declined. However, in the case of new companies, they still play a relatively greater role than in the case of older companies.

19.3.3 Private Equity

Private equity consists of investors and funds that make investments directly into private companies or conduct buyouts of public companies that result in a delisting of public equity. Capital for private equity is raised from retail and institutional investors, and can be used to fund new technologies, expand working capital within an owned company and make acquisitions or to strengthen a balance sheet. The majority of

private equity consists of institutional investors and accredited investors who can commit large sums of money for long periods of time. Private equity investments often demand long holding periods to allow for a turnaround of a distressed company or a liquidity event such as an IPO or sale to a public company. The size of the private equity market has grown steadily since the 1970s. Private equity firms will sometimes pool funds together to take very large public companies private. There were several private equity purchases in excess of $30 billion during 2006 and 2007 alone. Many private equity firms conduct what are known as leveraged buyouts (LBOs) where large amounts of debt are issued to fund a large purchase. Private equity firms will then try to improve the financial results and prospects of the company in the hopes of re-selling the company to another firm or cashing out via an IPO.

19.3.4 Valuation of Ordinary Shares (Common Stocks)

The value of an asset is the present value of its expected future cash flows. The value of a common stock is the present value of all future dividends. The model is as follows:

$$P_0 = \sum_{t=1}^{n} \frac{D_t}{(1+R)^t} = \frac{D_1}{(1+R)^1} + \frac{D_2}{(1+R)^2} + \ldots\ldots + \frac{D_n}{(1+R)^n} \tag{19.1}$$

P_0 = Current price

D_t = The expected dividend at time t.

R = The investor's required rate of return on a security

If the growth rate 'g' is constant, then

$$P_0 = \frac{D_0(1+g)^1}{(1+R)^1} + \frac{D_0(1+g)^2}{(1+R)^2} + \ldots\ldots + \frac{D_0(1+g)^n}{(1+R)^n}$$

Taking the common term D_0, we can rewrite it as follows:

$$P_0 = D_0\left[\frac{(1+g)^1}{(1+R)^1} + \frac{(1+g)^2}{(1+R)^2} + \ldots\ldots + \frac{(1+g)^n}{(1+R)^n}\right] \tag{19.2}$$

Multiply both sides in the above equation by $\frac{1+R}{1+g}$, we can have

$$P_0 = \left[\frac{1+R}{1+g}\right] = D_0\left[1 + \frac{(1+g)^1}{(1+R)^1} + \frac{(1+g)^2}{(1+R)^2} + \ldots\ldots + \frac{(1+g)^n}{(1+R)^n}\right] \tag{19.3}$$

Subtract the equation (19.2) from equation (19.3)

$$P_0\left[\frac{1+R}{1+g} - 1\right] = D_0\left[1 - \frac{(1+g)^n}{(1+R)^n}\right] \tag{19.4}$$

Assume that $R > g$; when $n \to \infty$ then $\frac{(1+g)^n}{(1+R)^n}$ will be closely equal to zero and the right hand side of equation (19.4) will be left with D_0. Hence, simplifying this equation

$$P_0\left[\frac{1+R-1-g}{1+g}\right]=D_0$$

$$P_0\left[\frac{R-g}{1+g}\right]=D_0\text{; further simplification gives rise to the following equation:}$$

$$P_0(R-g)=D_0(1+g)$$

As we know it earlier that $D_0(1+g)=D_1$, so the final equation will be as follows:

$$P_0=\frac{D_1}{R-g} \tag{19.5}$$

This model is based upon three assumptions, that is, the growth of dividend is constant, will be paid for infinite period of time, and the required return is always greater than the dividend growth rate.

Example: Suppose ABC Ltd. paid a dividend of ₹4.00 per share for the last year. The dividends are expected to grow at the rate of 6 percent per year thereafter. If the required rate is 15 percent, then what will be the value per share? If the current price is ₹50, what would be the growth rate in dividends to justify this price?

$$D_0=₹4.00,\ G=6\%,\ R=15\%$$

$$D_1=4.00\times(1+0.06)=₹4.24$$

Hence, $P_0=\frac{D_1}{R-g}=\frac{4.24}{0.15-0.06}=₹47.11$

To address the second issue, let us substitute all known value

$$P_0=\frac{D_0(1+g)}{R-g}$$

$50=\frac{400(1+g)}{0.15-g}$, simplifying this equation we can obtain

$$54g=(50\times0.15)-4$$

$$g=0.0648=6.48\%$$

19.3.5 Two Stage Growth Model

Assuming the different growth rate in two different periods, that is, the supernormal growth rate (g_1) of dividend in the beginning and a stable rate (g_2) after that for indefinite period the formula for valuation of equity is as follows:

$$P_0=\sum_{t=1}^{n}\frac{D_0(1+g_1)}{(1+r_{cs})^t}+\frac{1}{(1+r_{cs})^n}\times P_n \tag{19.6}$$

where, $P_n=D_{n+1}/(r_{cs}-g_2)$ (the terminal price), D_0 = current dividend; g_1 = its supernormal growth rate; n = number of years of supernormal growth; P_n = price of stock at the end of super-normal growth period which is based on the dividend growth rate of g_2 from $n+1$ to infinite period.

Example: The dividend per share of a company ABC Ltd. was ₹5.28. Its dividend has grown at 4 percent per year for the first 4 years and the growth rate after 4 years is expected to be 3 percent, which will be stable throughout. The required rate of return of the company is 12 percent. In the stable growth period the company paid ₹6.09 per share. Compute the value of the company?

Answer:

Dividend in the high-growth period = ₹5.28

Growth rate in the high-growth period = 4% (g_1)

Length of the high-growth period = 4 years

Discount rate = 12%

Stable growth rate = 3% (g_2)

$$P_n = D_{n+1}/(r - g_2) = \frac{6.09 \times (1.05)^4 (1.03)}{(0.12 - 0.03)} = ₹81.62$$

$$\text{Price } (P_0) = \frac{5.28 \times 1.04\,[1 - (1.04)^4/(1.12)^4]}{(0.12 - 0.04)} + \frac{81.62}{(1.12)^4}$$

$$= ₹17.61 + ₹51.87 = ₹69.48 \text{ (Answer)}$$

19.3.6 Valuation of Preferred Stock

The owner of the preferred stock receives stated dividend for an infinite period. It is basically perpetuity as it has no maturity. Its value is simply the stated dividend (D) divided by the required rate of return on preferred stock (r). It can be represented as follows:

$$P = \frac{D}{r} \tag{19.7}$$

Example: Consider a preferred stock having the par value of ₹100 and dividend of ₹10 per year. The required rate of return of this stock is 8 percent. The value of the stock will be as follows:

P = ₹10/0.08 = ₹125

19.4 PRIMARY MARKET[2]

LO 3
Understand primary market

In the primary market, primarily, issues made by an Indian company can be classified as public, rights, bonus and private placement. While offering of right issues by a listed company and public issues involve a detailed procedure, the procedures for offering bonus issues and private placements are relatively simpler. The classification of issues is as illustrated in Figure 19.1. Companies that need funds can issue stocks to investors. When a corporation first decides to issue stock to public to raise funds it engages in an *initial*

[2]SEBI, Issues by Indian Companies in India, 2013.

public offering (IPO). Even after a firm has gone public, it may need to raise additional equity to support its growth. In that case, it can engage in a secondary offering by issuing additional shares of stocks to the public. In India, it is defined as *follow-on public offer* (FPO). It is defined as a process by which a company, which is already listed on an exchange, issues new shares to the investors or the existing shareholders, usually the promoters. FPO is used by companies to diversify their equity base.

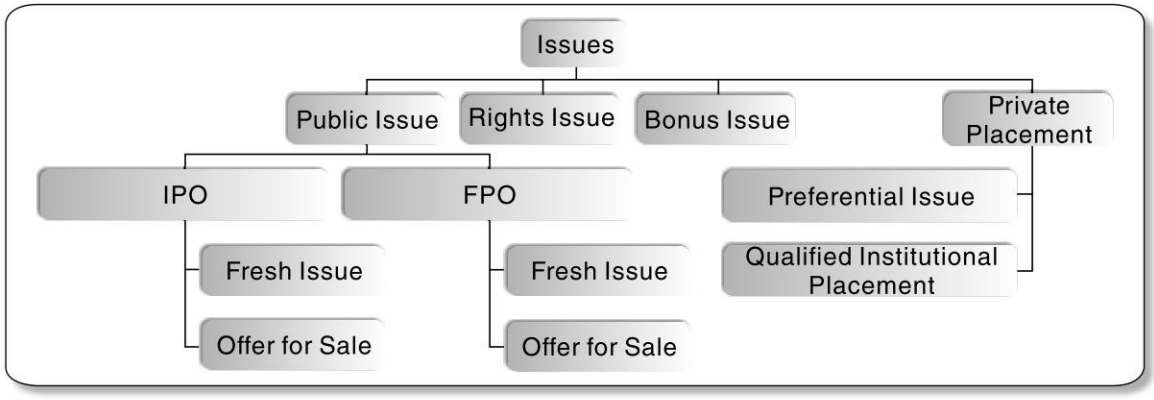


Figure 19.1 **Classifications of issues in primary market in India.**

When an issue of securities is made by an issuer to its shareholders existing as on a particular date fixed by the issuer (i.e. record date), it is called a *rights issue*. The rights are offered in a particular ratio to the number of securities held as on the record date. When an issuer makes an issue of securities to its existing shareholders as on a record date, without any consideration from them, it is called a *bonus issue*. The shares are issued out of the Company's free reserve or share premium account in a particular ratio to the number of securities held on a record date.

When an issuer makes an issue of securities to a select group of persons not exceeding 49, and which is neither a rights issue nor a public issue, it is called a *private placement*. Private placement of shares or convertible securities by listed issuer can be of two types: (i) *Preferential allotment*: When a listed issuer issues shares or convertible securities to a select group of persons in terms of provisions of Chapter XIII of SEBI (DIP) guidelines[3], it is called a preferential allotment. The issuer is required to comply with various provisions which *inter-alia* include pricing, disclosures in the notice, lock-in and so on in addition to the requirements specified in the Companies Act. (ii) *Qualified institutions placement* (*QIP*): When a listed issuer issues equity shares or securities convertible in to equity shares to qualified institutions buyers only in terms of provisions of Chapter XIIIA of SEBI (DIP) guidelines, it is called a QIP.

19.4.1 Initial Public Offerings

The SEBI has laid down certain entry norms for entities making a public issue. Entry norms for different routes available to an issuer for accessing the capital market are as follows:

1. An unlisted issuer making a public issue, that is, (making an IPO) is required to satisfy the following provisions:[4]

[3]For details see SEBI, *Disclosure and Investor Protection Guidelines*, 2000.
[4]SEBI, *Issues by Indian Companies in India*, 2013.

(i) *Entry Norm I (profitability route):* The issuer company shall meet the following requirements: (a) net tangible assets of at least ₹3 crores in each of the preceding 3 full years. (b) Distributable profits in at least 3 of the immediately preceding 5 years. (c) Net worth of at least ₹1 crore in each of the preceding 3 full years. (d) If the company has changed its name within the last 1 year, at least 50 percent revenue for the preceding 1 year should be from the activity suggested by the new name. (e) The issue size does not exceed five times the pre-issue net worth as per the audited balance sheet of the last financial year.

(ii) *Entry Norm II (QIB route):* (a) Issue shall be through book-building route, with at least 50 percent to be mandatory allotted to the qualified institutional buyers (QIBs). (b) The minimum post-issue face value capital shall be ₹10 crores or there shall be a compulsory market-making for at least 2 years.

(iii) *Entry Norm III (appraisal route):* (a) The 'project' is appraised and participated to the extent of 15 percent by financial institutions/scheduled commercial banks of which at least 10 percent comes from the appraiser(s). (b) The minimum post-issue face value capital shall be ₹10 crores or there shall be a compulsory market-making for at least 2 years.

(iv) In addition to satisfying the aforesaid entry norms, the issuer company shall also satisfy the criteria of having at least 1000 prospective allottees in its issue.

2. A listed issuer making a public issue (FPO) is required to satisfy the following requirements:

(a) If the company has changed its name within the last 1 year, at least 50 percent revenue for the preceding 1 year should be from the activity suggested by the new name. (b) The issue size does not exceed five times the pre-issue net worth as per the audited balance sheet of the last financial year.

Certain category of entities like private sector banks, public sector banks and an infrastructure company whose project has been appraised by a public financial institution or IDFC or IL&FS or a bank which was earlier a PFI and not less than 5 percent of the project cost that is financed by any of these institutions are exempted from the aforesaid entry norms.

Besides the entry norms, an issuer making a public issue is required to *inter-alia* comply with the following provisions mentioned in the guidelines:

Minimum Promoter's contribution and lock-in: In a public issue by an unlisted issuer, the promoters shall contribute not less than 20 percent of the post-issue capital which should be locked in for a period of 3 years. 'Lock-in' indicates a freeze on the shares. The remaining pre-issue capital should also be locked in for a period of 1 year from the date of listing. In case of public issue by a listed issuer, that is FPO, the promoters shall contribute not less than 20 percent of the post-issue capital or 20 percent of the issue size. This provision ensures that promoters of the company have some minimum stake in the company for a minimum period after the issue or after the project for which funds have been raised from the public is commenced.

IPO Grading: IPO grading is the grade assigned by a credit rating agency registered with SEBI, to the initial public offering (IPO) of equity shares or other convertible securities. The grade represents a relative assessment of the fundamentals of the IPO in relation to the other listed equity securities. Disclosure of 'IPO Grades', so obtained is mandatory for companies coming out with an IPO.

For issuing the public issues an 'Offer document' is prepared, which contains all the relevant information about the company, promoters, projects, financial details, objects of raising the money, terms of the issue, and

so on, and is used for inviting subscription to the issue being made by the issuer. 'Offer Document' is called '*Prospectus'* in case of a public issue or offer for sale and '*Letter of Offer*' in case of a rights issue.

Book Building and Fixed Price Option in the IPOs

On the basis of pricing, an issue can be further classified into fixed price issue or book built issue. In fixed price process in IPOs, allotments of shares to all investors are made on proportionate basis. In book building, the price is determined on the basis of demand received or at price above or equal to the floor price whereas in fixed price option, the price of issues is fixed first and then the securities are offered to the investors.

In case of Book-Building process book is built by Book Runner Lead Manager (BRLM) to know the everyday demand whereas in case of fixed price of public issues, the demand is known at the close of the issue. In the case of fixed price issue, the issue price is always mentioned in the offer document, and for book-building issue, the price is mentioned after discovering it from the demand received from prospective investors. The details about the two types of issues are given in Table 19.1. The steps which are usually followed in the book-building process have been summarised as follows:[5]

(i) The issuer company proposing an IPO appoints a lead merchant banker as a BRLM.

(ii) Initially, the issuer company consults with the BRLM in drawing up a draft prospectus (i.e. offer document) which does not mention the price of the issues, but includes other details about the size of the issue, past history of the company and a price band. The securities available to the public are separately identified as 'net offer to the public'.

(iii) The draft prospectus is filed with SEBI which gives it a legal standing.

(iv) A definite period is fixed as the bid period and BRLM conducts awareness campaigns such as advertisement, road shows and so on.

(v) The BRLM appoints a syndicate member, a SEBI-registered intermediary to underwrite the issues to the extent of 'net offer to the public'.

(vi) The BRLM is entitled to remuneration for conducting the Book-Building process.

Table 19.1 Types of public issues on the basis of pricing methods.

Issue type	*Offer price*	*Demand*	*Payment*	*Reservations*
Fixed Price Issues	Price at which the securities are offered and would be allotted is made known in advance to the investors.	Demand for the securities offered is known only after the closure of the issue.	In total, 100 percent advance payment is required to be made by the investors at the time of application.	A total of 50 percent of the shares offered are reserved for applications below ₹1 lakh and the balance for higher amount applications.
Book-Building Issues	A 20 percent price band is offered by the issuer within which investors are allowed to bid and the final price is determined by the issuer only after closure of the bidding.	Demand for the securities offered, and at various prices, is available on a real-time basis on the BSE website during the bidding period.	A 10 percent advance payment is required to be made by the QIBs along with the application, while other categories of investors have to pay 100 percent advance along with the application.	A total of 50 percent of shares offered are reserved for QIBS, 35 percent for small investors and the balance for all other investors.

[5]See also Saha, S.K. 'The Book Building Mechanism of IPOs', The Chartered Accountant, August 2004.

(vii) The copy of the draft prospectus may be circulated by the BRLM to the institutional investors as well as to the syndicate members.

(viii) The syndicate members create demand and ask each investor for the number of shares and the offer price.

(ix) The BRLM receives the feedback about the investor's bids through syndicate members.

(x) The prospective investors may revise their bids at any time during the bid period.

(xi) The BRLM on receipts of the feedback from the syndicate members about the bid price and the quantity of shares applied has to build up an order book showing the demand for the shares of the company at various prices. The syndicate members must also maintain a record book for orders received from institutional investors for subscribing to the issue out of the placement portion.

(xii) On receipts of the above information, the BRLM and the issuer company determine the issue price. This is known as the market-clearing price.

(xiii) The BRLM then closes the book in consultation with the issuer company and determines the issue size of (a) placement portion and (b) public offer portion.

(xiv) Once the final price is determined, the allocation of securities should be made by the BRLM based on prior commitment, investor's quality, price aggression, earliness of bids, and so on. The bid of an institutional bidder, even if he has paid full amount may be rejected without being assigned any reason as the Book-Building portion of institutional investors is left entirely at the discretion of the issuer company and the BRLM.

(xv) The Final prospectus is filed with the registrar of companies within 2 days of determination of issue price and receipts of acknowledgement card from SEBI.

(xvi) Two different accounts for collection of application money, one for the private placement portion and the other for the public subscription should be opened by the issuer company.

(xvii) The placement portion is closed a day before the opening of the public issue through fixed price method. The BRLM is required to have the application forms along with the application money from the institutional buyers and the underwriters to the private placement portion.

(xviii) The allotment for the private placement portion shall be made on the second day from the closure of the issue and the private placement portion is ready to be listed.

(xix) The allotment and listing of issues under the public portion (i.e. fixed price portion) must be as per the existing statutory requirements.

(xx) Finally, the SEBI has the right to inspect such records and books which are maintained by the BRLM and other intermediaries involved in the book-building process.

Reverse Book Building

The reverse book building is a mechanism provided for capturing the sell orders on online basis from the shareholders through respective book running lead managers (BRLMs) which can be used by companies intending to delist its shares through buy-back process. In the reverse book-building scenario, the acquirer/ company offers to buy-back shares from the shareholders. The reverse book building is basically a process

used for efficient price discovery. It is a mechanism where, during the period for which the reverse book building is open, offers are collected from the shareholders at various prices, which are above or equal to the floor price. The buy-back price is determined after the offer closing date. Business process for delisting through book building is as follows:

(i) The acquirer shall appoint designated book running lead manager (BRLM) for accepting offers from the shareholders.

(ii) The company/acquirer intending to delist its shares through book-building process is identified by way of a symbol assigned to it by BRLM.

(iii) Orders for the offer shall be placed by the shareholders only through the designated trading members, duly approved by the exchange.

(iv) The designated trading members shall ensure that the security/shareholders deposit the securities offered with the trading members prior to placement of an order.

(v) The offer shall be open for '*n*' number of days.

(vi) The BRLM shall intimate the final acceptance price and provide the valid accepted order file to the National Securities Clearing Corporation Limited.

19.5 SECONDARY EQUITY MARKET

LO 4
Discuss secondary equity market

The secondary equity market is where securities are traded after being initially offered to the public in the primary market and/or being listed on the stock exchange. The stock exchanges along with a host of other intermediaries provide the necessary platform for trading in the secondary market, and also for clearing and settlement. The securities are traded, cleared and settled within the regulatory framework prescribed by the exchanges and the SEBI. The secondary market operates through two mediums, namely, the over-the-counter (OTC) market and the exchange-traded market. The OTC markets are informal markets where trades are negotiated. Most of the trades in government securities take place in the OTC market. All the spot trades where securities are traded for immediate delivery and payment occur in the OTC market. The other option is to trade using the infrastructure provided by the organised stock exchanges. Each organised exchange has a trading floor where floor traders execute transactions in the secondary market for their clients. Individuals and firms that purchase a seat on a stock exchange become members of the exchange and obtain the right to trade securities there. The trading that takes place on the floor of an exchange resembles an auction. Any member of the exchange can act as both a seller and buyer. Those members of the exchange attempting to sell a client's stock strive to obtain the highest price possible. When members of the exchange announce the sale of certain number of shares of a certain stock, they receive bids for that stock by other members. The sellers either accept the highest bid immediately or wait until an acceptable bid is offered. Currently, there are 20 organised stock exchanges existing in India. Among them three stock exchanges are national and others are regional stock exchanges (RSEs). Particularly, there are two prominent stock exchanges in India, that is, Bombay Stock Exchange (BSE) and National Stock Exchange of India (NSE).

19.5.1 Bombay Stock Exchange (BSE)

The BSE was established in 1875 and it is the Asia's first stock exchange and one of India's leading exchange groups. Over the past 137 years, BSE has facilitated the growth of the Indian corporate sector by providing it an efficient capital-raising platform. Popularly known as BSE, the bourse was established as 'The Native Share & Stock Brokers' Association' in 1875. BSE is a corporatised and demutualised entity, with a broad shareholder-base which includes two leading global exchanges, Deutsche Bourse and Singapore Exchange as strategic partners. BSE provides an efficient and transparent market for trading in equity, debt instruments, derivatives and mutual funds (MF). It also has a platform for trading in equities of small- and-medium enterprises (SME). BSE's popular equity index—the S&P BSE SENSEX—is India's most widely tracked stock market benchmark index. It is traded internationally on the EUREX as well as leading exchanges of the BRCS nations (Brazil, Russia, China and South Africa).

19.5.2 National Stock Exchange of India (NSEI)

NSE was promoted by leading Financial Institutions at the behest of the Government of India and was incorporated in November 1992 as a tax-paying company unlike other stock exchanges in the country. The NSEI has a fully automated, electronic, screen-based trading system. Its objectives are (a) to provide nation-wide equal access and fair, efficient, completely transparent securities trading system to investors by using suitable communication network, (b) to provide shorter settlement cycles and book entry settlement system, (c) to bring the Indian stock market in line with international markets, and (d) to promote the secondary market in debt instruments such as government and corporate bonds. The National Stock Exchange (NSE) operates a nation-wide, electronic market, offering trading in capital market, derivatives market, and currency derivatives segments including equities, equities-based derivatives, currency futures and options, equity-based ETFs, Gold ETF and retail government securities. Today NSE network stretches to more than 1500 locations in the country and supports more than 230,000 terminals. It has two separate segments: (a) One is the wholesale debt market segment (WDMS) which caters to banks, financial institutions and other institutional participants, and which deals in PSU bonds, units, TBs, government securities, call money, CPs, CDs and so on. Everything is big in this segment; there are mega players, mega investors and mega deals in it. (b) The other is the capital market segment (CMS) which deals in equities, convertible debentures, and so on. These include securities that are traded on other stock exchanges also. WDMS started functioning from 30 June, 1994. Trading in CPs began on 16 August, 1994. CMS began trading from 3 November, 1994. The NSEI introduced trading in repos with effect from 23 June, 1995. Recently, the RBI has identified the NSEI as the only conduit for interbank security deals. The NSEI is an order-driven and not a quote-driven market, and it allows trading members to trade from their offices through a communication network. The firms whose shares are traded on it are divided into two categories: listed and permitted. Although there are many indexes available with NSEI, the most popular index in NSEI has been CNX Nifty.

19.5.3 Over-the-Counter Exchange of India (OTCEI)

It was set up in 1992 and was the first stock exchange in India to introduce screen-based automated ringless trading system. It is promoted by UTI, ICICI, IDBI, IFCI, LIC, GIC, SBI Caps, and CANBANK as a company under Section 25 of the Companies Act 1956, with headquarters at Mumbai. Its objectives are

(a) to help companies to raise capital from the market at the cheapest costs and on optimal terms; (b) to help investors to access capital market safely and conveniently; (c) to cater to the needs of the companies which cannot be listed on other official exchanges; and (d) to eliminate the problems of illiquid securities, delayed settlements and unfair prices faced by the investors. The securities which are traded on OTCEI are divided into three categories: (a) listed, (b) permitted, and (c) initiated. These securities cannot be traded on other stock exchanges. However, they can be bought and sold at any of the OTCEI counters all over India. It has two players: members and dealers (instead of brokers) who can perform the functions of broking, trading on their own accounts and market-making. While the members can engage in sponsorship, the dealers cannot. Scheduled banks, mutual funds, banking subsidiaries, FIs, merchant bankers, venture capital funds, and NBFCs other than finance and leasing companies having a minimum net worth of ₹3 crore can become members of OTCEI.

It has an online trading-cum-depository, quote-driven and transparent system of trading. It follows $T + 3$ settlement system which is the fastest in the country. It provides a liquid cash market for the retail investors. The existence of market maker (MM) [6] and the modern trading and settlement system on it ensures deliveries versus payment on time. There are no problems of bad deliveries or short deliveries because the system allows the execution of trades only on the basis of electronic inventory of scrips. It encourages domestic and foreign institutional investors also to trade on it by offering them netting facilities for both intra-custodian and inter-custodian transactions. The trading on OTCEI is based on the roll-over concept which means all trading done on any day is settled on the same day itself, and the netting with the previous or subsequent day's transactions is not permitted. The physical deliveries are consolidated and done once in 5 days or a week. Thus, OTCEI is a cash and retail market for small investors and small companies. With the passage of time, however, the focus of its activity is shifting to bigger 'permitted' scrips, among which Reliance is one.

In spite of its many advantages, OTCEI has been languishing since its inception. The reasons for low activity on OTCEI are said to be (a) stringent market making norms, (b) mandatory requirement that the sponsor must offer buy and sell quotes in all the scrips with the spread not exceeding 10 percent, (c) banks' aversion to finance market-making and (d) $T + 3$ settlement period not permitting speculation. Some people have criticised OTCEI for these factors and have suggested relaxation in them. In our view, these are the strengths of OTCEI and they should not be discarded merely for the sake of increasing the volume of business, because such an increase would then occur through unhealthy policies. Worried by the stagnant activity on OTCEI, the authorities (SEBI) appointed two committees—Malegam and Dave Committees—within a short period of 2–3 years to review its working and to suggest measures to improve its functioning. The recommendations of these committees have been in the direction of relaxing the strict norms with which OTCEI had begun operating.

19.5.4 Other Stock Exchanges in India

Apart from the three SEs in Mumbai, there are 17 other national and regional exchanges located in metropolitan centres and other cities in India as on June 2014. These stock exchanges are Ahmedabad Stock Exchange

[6]The market making means that a trader or a company puts forth buy and sell orders in the market and waits for someone to trade with him on either side. The MM is normally a stock exchange member who provides two-way quote for buy and sell orders with a maximum spread on a continuous basis for a minimum quantity of stocks. The ordinary investors and traders 'take the market', that is, they buy at the offer price and sell at the bid price. However, the MM can sell at the offer price and buy at the bid price. The system was much prevalent in Indian stock exchanges during the floor-based trading when the jobbers used to play the role of MM. But it did not work well due to lack of transparency. In an order-driven screen-based trading system, the MMs are absent.

Ltd., Bangalore Stock Exchange Ltd., Bhubaneswar Stock Exchange Ltd., Calcutta Stock Exchange Ltd., Cochin Stock Exchange Ltd., Delhi Stock Exchange Ltd., Guwahati Stock Exchange Ltd., Inter-Connected Stock Exchange of India Ltd., Jaipur Stock Exchange Ltd., Ludhiana Stock Exchange Ltd., MCX-Stock Exchange Ltd., Madhya Pradesh Stock Exchange Ltd., Madras Stock Exchange Ltd., Pune Stock Exchange Ltd., Vadodara Stock Exchange Ltd., U.P. Stock Exchange Ltd., and United Stock Exchange of India Ltd., Mumbai. The regional stock exchanges had hardly any share in the total turnover in the market.

19.6 TYPES OF INVESTOR IN THE STOCK MARKET

Broadly, the investors in the stock market can be categorised into two types, such as, *investors* and *traders* on the basis of their investment horizon period and objectives. The goal of the investor is to participate in the market over a long period of time through the buying and holding of the stocks to maximise his return. Investors often maximise their profit through reinvesting their dividends and profits in additional stocks. Investors hold their stocks for a period of years or even decades, taking the advantage of the changes of the fundamental factors such as interest rates, dividends and other company-specific events. Investors are generally more concerned with market fundamentals like price-earnings ratio, market risk, and so on. Traders on the other hand, involve frequent buying and selling of stocks with the objective of generating returns more than the returns received from buy and hold investing. For traders, profits are generated through buying at a lower price and selling at higher price within a short period of time. Mostly the traders rely more on the technical analysis to take their investment decisions in the market. Traders are generally categorised into four types on the basis of their investment horizon period. (i) *Position Trader*: Positions are held from months to years, (ii) *Swing Trader*: Positions are held from days to weeks, (iii) *Day Trader*: Positions are held throughout the day and no overnight position, and (iv) *Scalp Traders*: Positions are taken seconds to minutes and no overnight position.

In general investors are classified as *individual or retail investors* and *institutional investors*. Each retail investor's investments are typically small and they do not have substantial influence on the management's decision. Institutional investors include all the financial institutions such as mutual funds, insurance companies, commercial banks, pension funds, and so on. Since a financial institution has larger equity position in a corporation it has more voting power and is more capable of influencing the changes in the management of a corporation. Mostly, the insurance companies, pension funds and equity mutual funds are the common purchasers of newly issued stocks in the primary market and these institutions also invest in stocks which are being traded in the secondary market. In India, foreign institutional investors play a significant role in the development of secondary equity market. Basically, the financial institutions increase the marketability of the stocks by creating an active secondary market. Financial institutions not only participate in stock market in terms of investing funds but also issue their own stocks as a means of raising funds. For example, a pension fund may purchase the newly issued stock of an insurance company and if the pension fund someday sells these stocks in the secondary market, a commercial bank may act as a purchaser. As financial institutions hold large amount of stocks, their collective sales and purchases of stocks can affect the stock market prices significantly.

Investors Decisions and Stock Prices

Investors buy the shares of a particular stock when their valuation of the stock exceeds the existing market price of the share and the investors who are holding the stocks sell their shares when their valuation has been below the existing market price. There are different valuation techniques used in the market for valuing the equity (see Chapter 2) and the differences in valuations among investors make some investors to believe that a stock is undervalued and while others believe that it is overvalued. The differences in opinions allow for market trading as there will be buyers and sellers of the same stock at a given point of time. Changes in the opinion of the investors on the basis of their valuation method shift the demand for and supply of shares and their equilibrium prices. If the demand for shares exceeds the supply of shares for sale then an upward pressure has been created on the market price, but if the supply of shares for sales exceeds the demand for shares then a downward pressure is created. Therefore, the market price of the share is determined by the participation of the investors in aggregate in the equity market.

Information and Investors Decisions

Investors' opinion or expectations about the company's future performance depends on the release of new information about the company. The favourable news about the company's performance make the investors believe that the company's stock is undervalued in the current market price and, therefore, the demand for share of that stock increases, which put upward pressure on the stock price. Conversely, unfavourable news about the performance of the company make the investors believe that the stock is already overvalued at its current market price, so that some investors sell their shares, which put downward pressure on the stock price. Overall, we can say that the available news or information about the company largely determine the company fundamentals and which, in turn, affect the equilibrium price of the share in the market.

Investors Sentiment and Stock Price

In recent years a burgeoning field of study called behavioural finance makes a distinctive approach to study how psychological phenomena impact financial behaviour of participants in the financial market. In finance literature, this new approach for the pricing of risky assets is commonly termed as 'behavioral asset pricing' (Shefrin, 2005). Alternative to the efficient markets paradigm and assumption of complete arbitrage, behavioural finance is built upon two fundamental arguments towards mispricing in financial markets, that is, the role of cognitive biases (Kahneman and Tversky, 1979) and limited arbitrage in the determination of stock prices (Shleifer and Vishny, 1997; Barberies and Thaler, 2003).

Motivated from the literature of experimental psychology, the behavioural asset pricing theory assumes that investors are not completely rational but normal and systematic cognitive biases induce them to invest based on instinct and not on fundamentals (Rabin, 1998; Barberis and Thaler, 2003; Ritter, 2003; Stracca, 2004; Subrahmanyam, 2007; Byrne and Brooks, 2008). Based on the cognitive psychology literature, behavioural finance uses models where investors are not completely rational because of the several

inherent cognitive biases. At a fundamental level, the inherent cognitive biases are having two aspects, which arise either because of preferences or because of mistaken beliefs (Barberis and Thaler, 2003 p. 1063; Ritter, 2003 p. 430). Cognitive biases that arise because of preferences include mental accounting, framing, narrow framing, regret aversion and familiarity (Barberis and Thaler, 2003; Byrne and Brooks, 2008). On the other hand, cognitive biases that arise when people form beliefs include conservatism, representativeness, salience effect, disposition effect, heuristics, over and under reaction, availability bias, frame dependence, anchoring, optimism, bandwagon effect, innumeracy, extrapolation bias, illusory superiority or Dunning–Kruger effect, wishful thinking and belief perseverance (Baker and Nofsinger, 2002; Barberis and Thaler, 2003; Ritter, 2003). Such inherent cognitive biases of investors' succumb their ability to differentiate between opinions and information (Black, 1986), strength and weight of information signals (Hirshleifer, 2001), and instinct and rationality (Shiller, 2005). In such an environment, the herd behaviour and unexpected boom and bust in the financial market (Abreu and Brunnermeier, 2003) are the mere reflection of their trading behaviour in terms of the noise (Black, 1986; De Long *et al*., 1990) rather the fundamentals.

The second fundamental argument of behavioural approach to equity pricing is the limited arbitrage opportunity in the face of persistent noise trading (Shleifer and Vishny, 1997). The efficient market hypothesis (Fama, 1970) assumes that investors are rational and value securities rationally. Following the efficient markets hypothesis the traditional neoclassical paradigm of finance literature argue that competition between investors seeking abnormal profits drives prices back to their fundamental equilibrium value and any short-run over- or undervaluation in the stock prices will be corrected by the presence of profit-seeking rational arbitrageurs (Barberis *et al*., 1998). In contrast, literature on behavioural asset pricing suggest that, within a dynamic interplay between irrational investors or noise traders and rational arbitrageurs for the determination of security prices (Shleifer and Summers, 1990; Daniela *et al*., 2002), rational arbitrageurs may limit their positions in the market to avoid their loss because of the persistent noise trader risk (Black, 1986; DeLong *et al*., 1990), short sell constraint (Miller, 1977), interaction of agency costs and capital constraints (Shleifer and Vishny, 1997). Trading by uninformed investors causes the mispricing to increase before it corrects, and the arbitrageur are unable to maintain the position in the face of margin calls, especially when trading with other people's capital in an institutional investment management scenario (Barberis *et al*. 1998; Byrne and Brooks, 2008). Moreover, the first key argument of behavioural finance towards the persistent effect of behavioural biases of investors (noise traders) on the asset prices and returns holds well, only if, limits to arbitrage also exist that prevent rational investors from exploiting the short-term mispricing (Barberis and Thaler, 2003; Byrne and Brooks, 2008). Considering the aforementioned theoretical arguments, behavioural models often assume a specific form of noise-induced irrationality called irrational sentiment that arises because of some combinations of cognitive biases, and reinforce a particular valuation error (Barberis *et al*., 1998; Barberies and Thaler, 2003; De Long *et al*., 1990). However, it has been suggested that cognitive biases and valuation errors are more commonly made by less sophisticated retail investors as compared to the informed institutional investors (Kumar and Lee, 2006; Verma and Verma, 2009).

19.7 STOCK MARKET INDICES AND STOCK PRICE QUOTATIONS

Stock market indexes are used (i) to judge the performance of individual investor, (ii) to measure the market rates of return, and (iii) to predict the market movements. Factors affecting the construction of stock market index are as follows: (i) sample, it should be representative of total population; (ii) base year, it should be a normal year; and (iii) weighting criteria, equally weighted series, price-weighted series, market value-weighted series and free-float market capitalisation-weighted series. Free-float market capitalisation takes into consideration only those shares issued by the company that are readily available for trading in the market. It generally excludes promoters' holding, government holding, strategic holding and other locked-in shares that will not come to the market for trading in the normal course. In other words, the market capitalisation of each company in a free-float index is reduced to the extent of its readily available shares in the market.

Example:

Stock	*Quantity*	*Base year price*	*Current price*	*Free-float factor*
A	60,000	30	45	0.55
B	20,000	25	80	0.75
C	90,000	65	85	0.95

Solution:

Equally weighted series = $1/3(45/30 + 80/25 + 85/65) = 2.0033$

Price weighted series = $(45 + 80 + 85))/(30 + 25 + 65) = 1.75$

Market value-weighted series = $(60{,}000 \times 45 + 20{,}000 \times 80 + 90{,}000 \times 85)/(60{,}000 \times 30 + 20{,}000 \times 25 + 90{,}000 \times 65) = 1.46$

Free-float market value-weighted series = $(60{,}000 \times 45 \times 0.55 + 20{,}000 \times 80 \times 0.75 + 90{,}000 \times 85 \times 0.95)/(60{,}000 \times 30 \times 0.55 + 20{,}000 \times 25 \times 0.75 + 90{,}000 \times 65 \times 0.95) = 1.43$

If the base value of the index has been taken as 100, then in the current year the value of the index using different weighting series will be as follows: (i) equally weighted: 200.33, (ii) price-weighted: 175, (iii) market value-weighted: 146 and (iv) free-float market value-weighted: 143.

Although there are many stock indices available across the world, we have reported features of some major stock indices in India and the United States (Table 19.2).

Table 19.2 Features of major stock indices in India and abroad

Indices	*Sample*	*Base year*	*Base value*	*Weighting criteria*
S&P BSE SENSEX	30	1978–1979	100	Value weighted from the beginning, but since 1 September, 2003 it uses free-float methodology
CNX NIFTY	50	3 November 1995	1000	Value weighted from the beginning, but since 26 June, 2009 it uses free-float methodology
DJIJ	30	1938	100	Free-float
S&P Composite	500	1941–1942	10	Value
NYSE	2818	1965	50	Value

19.7.1 Stock Price and Stock Index Quotations

The trading of stocks between investors in the secondary market (stock exchanges) causes any stock's price or exchange value to change. Investors can monitor stock price quotations and stock index quotations from financial newspapers and the respective stock exchange web sites. Stock prices are always quoted on a per share basis. Stock indexes serve as performance indicators of a specific segment of a market and these allow investors to compare the performance of individual stocks with general market indicators.

Table 19.3 Quotation of stock price and stock indexes

Symbol	*Date*	*Open*	*High*	*Low*	*Closing*	*Traded volume*	*Value of trades (Rupees—crores)*	*P/E*	*P/B*	*Dividend yield*	*52-week high*	*52-week low*
1	2	3	4	5	6	7	8	9	10	11	12	13
CNX Nifty	30-06-2014	7534.05	7623.65	7531.6	7611.35	152303166	7887.37	20.65	3.48	1.29	7700.05	5118.85
SBI	30-06-2014	2650.00	2706.95	2645.5	2686.25	389,993	136.80	18.45	1.36	1.11	2834.90	1452.70

Table 19.3 presents an example of the stock price and stock index quotations. The explanations of the concepts used in the table are explained below.

Column 1: It represents the name of the company (Index).

Column 2: This represents the date of transaction or trade.

Column 3: It represents the price at which a security first trades upon the opening of an exchange on a given trading day.

Column 4 & 5: This indicates the price range at which the stock has traded at throughout the day or these are the maximum and the minimum prices that investors have paid for the stock.

Column 6: The close is the last trading price recorded when the market closed on the day.

Column 7: This figure shows the total number of shares traded for the day.

Column 8: It indicates the total value of trades happened in the day.

Column 9: (Price/earnings ratio**)** This is calculated by dividing the current stock price by earnings per share. It indicates how much investors are willing to pay per unit of earnings.

Column 10: (Price/book value ratio) This is used to compare a stock's market value with its book value. It is calculated by dividing the current closing price of the stock by the latest quarter's book value.

Column 11: (Dividend yield) It is the percentage return on the dividend. It is calculated as annual dividends per share divided by price per share.

Column 12 & 13: These are the highest and lowest prices at which a stock has traded over the previous 52 weeks (1 year).

Exchange-Traded Funds (ETFs)

An exchange-traded fund comprises of a basket of stocks that reflect the composition of an index such as CNX Nifty or BSE SENSEX. The market value of ETFs is determined by the net asset value (NAV) of the underlying stocks it represents. It is essentially an index fund like mutual funds, but listed and traded on exchanges like stocks. The introduction of ETFs has opened a new window of investment opportunity for both retail as well as institutional investors. The expected return from ETF will be same as that from an index because it tracks a benchmark index. For example, if the return on investment (ROI) of CNX Nifty is expected to be 15 percent for a particular period (1 January, 2015 to 31 March, 2015), then the NAV of ETFs that tracks this benchmark index will be around 15 percent. Any difference in the returns of NAV and benchmark index could be due to the cost involved in managing ETFs. Owning ETFs would facilitate the investor to derive diversification benefit of an index fund as well as the ability to sell short and purchase as little as a share. The expense ratios of ETFs are less than that of mutual funds though they are equally tax efficient.

ETFs offer a number of advantages over traditional open-ended index funds as follows[7]:

- While redemptions of Index fund units takes place at a fixed NAV price (usually end of day), ETFs offer the convenience of intra-day purchase and sale on the Exchange, to take advantage of the prevailing price, which is close to the actual NAV of the scheme at any point in time.
- They provide investors a fund that closely tracks the performance of an index throughout the day with the ability to buy/sell at any time, whereby trading opportunities that arise during a day may be better utilised. They are low cost.
- Unlike listed closed-ended funds, which trade at substantial premia or more frequently at discounts to NAV, ETFs are structured in a manner which allows authorised participants and large institutions to create new units and redeem outstanding units directly with the fund, thereby, ensuring that ETFs trade close to their actual NAVs.
- ETFs are like any other index fund, wherein, subscription/redemption of units work on the concept of exchange with underlying securities instead of cash (for large deals).
- Since an ETF is listed on an Exchange, cost of distribution are much lower and the reach is wider. These savings in cost are passed on to the investors in the form of lower costs. Further, the structure helps reduce collection, disbursement and other processing charges.
- ETFs protect long-term investors from inflows and outflows of short-term investors. This is because the fund does not incur extra transaction cost for buying/selling the index shares due to frequent subscriptions and redemptions.
- **Tracking error**, which is divergence between the NAV of the ETF and the underlying Index, is generally observed to be low as compared to a normal index fund due to lower expenses and the unique in-kind creation/redemption process. The tracking error is calculated as follows:
  - Step I: Obtain the net asset values (NAV) and the total return (TR) index values for each day of the total time period required

[7]www.nseindia.com /products/content/equities/etfs/etfs_launched_on_nse.htm.

- Step II: Calculate the percentage change in the NAV and TR Index for each day over its previous day
- Step III: Calculate the difference between the percentage change in the NAV and the percentage change in the TR Index for each day
- Step IV: Calculate the standard deviation of the difference obtained from day (1) to day (n) in Step 3. Calculate the annualised tracking error as per the formula given below
- Annualised tracking error = Standard deviation obtained (Step 4) × sqrt (250)

- ETFs are highly flexible and can be used as a tool for gaining instant exposure to the equity markets, equitising cash or for arbitraging between the cash and futures market.

19.8 STOCK MARKET LIQUIDITY

A stock market is said to be liquid if traders can quickly buy or sell large numbers of shares with minimal impact on price, cost, and delay. It refers to the willingness of a market participant, a liquidity supplier, to take the opposite side in a transaction initiated by another trader, the liquidity demander. In practice, liquidity has been emerged as multidimensional and the literature has documented four dimensions of liquidity. The first one is *width*, referring to the *bid-ask spread* for a given number of shares and commissions, and fees to be paid per share. The *bid price* is the price the investors are ready to pay for the stocks and the *ask price* is the price at which the investors sell the stocks. Second, *depth* is the number of shares that can be traded at given bid and asks prices. The third one, *immediacy*, refers to how quickly trades of a given size can be done at a given cost. The final aspect is *resiliency*. It characterises how fast prices revert to former levels after they changed in response to large order flow imbalances initiated by uninformed traders. It is evident that these different dimensions do not stand independently rather may interact with each other. For example, if a trader is patient and does not need to trade immediately, he may obtain better prices and/or be able to trade a larger amount at given prices. In this case, width and depth depend on immediacy.

The liquidity of a stock depends upon the types of market and market microstructure where it is listed and traded. In general, stock markets can be classified along two main lines: order-driven versus quote-driven systems. In a quote-driven or dealer market, a market maker posts bid and ask prices at which he wants to buy or sell and takes the opposite side of each trade. In an order-driven or limit order market, traders interact directly with each other without intermediation. Interestingly, in a limit order market liquidity is only provided by traders and their unexecuted limit orders. The liquidity may also be influenced with respect to the stock market design, that is, transparency, anonymity, tick-size, and presence of trading floor. Transparency can be defined as the ability of market participants to observe information about the trading process. Information here refers to knowledge on prices, order flow, size of the order and other order book details. Related to transparency is the issue of anonymity, that is, the degree to which the identity of market participants is revealed; as with transparency, informed traders prefer anonymous trading, whereas liquidity traders do not. A distinction can be made between demand and supply side anonymity. Concealing information about the identity of liquidity demanders in general increases the bid-ask spread, since suppliers can less easily make a distinction between informed and uninformed traders. It has been observed that the reduction of tick size

decreases inside spread and depth at best bid and ask prices. Biais, Foucault and Salanie (1998) showed that large spreads and inefficient risk sharing occur in floor markets but not in screen-based limit order markets. Liquidity is of crucial importance to a number of agents such as traders, since it determines their cost of buying and selling assets; for stock exchanges to attract order flow from traders and in the competition for order flow with other exchanges or alternative trading systems, it is also important to convince firms to list on their exchange, as it is a determinant of their cost of capital and their decision about the optimal capital structure, and above all to the regulators to establish financial stability and economic harmony.

19.9 MARKET MICROSTRUCTURE IN INDIAN STOCK MARKET

19.9.1 Listing of Securities[8]

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Explain market microstructure in Indian stock market

Listing means the formal admission of a security to the trading platform of a stock exchange. The listing of securities on the domestic stock exchanges is governed by the provisions in the Companies Act, 2013, the Securities Contracts (Regulation) Act, 1956 [SC(R)A], the Securities Contracts (Regulation) Rules [SC(R)R], 1957, and the circulars/guidelines issued by the central government and SEBI as well as rules, by-laws and regulations of the particular stock exchange, and the listing agreement entered into by the issuer and the stock exchange. A number of requirements under the SC(R)R, the by-laws and the listing agreement have to be continuously complied with by the issuers in order to ensure the continuous listing of their securities. The listing agreement also stipulates the disclosures that have to be made by the companies. In addition, the corporate governance practices enumerated in the agreement have to be followed. The exchange is required to monitor compliance with the requirements. In case a company fails to comply with the requirements, the trading of its security would be suspended for a specified period or would be withdrawn/delisted, and a penalty would be imposed as prescribed in the SC(R)A.

19.9.2 Security Groupings

The equity scrips are classified by different stock exchanges in different ways. BSE has classified the scrips in the equity segment into 'A', 'B', 'T' and 'Z' groups on certain qualitative and quantitative parameters. Criteria for A shares are as follows: (1) Company must have been listed for minimum period of 3 months. (2) Companies traded for minimum 98 percent of the trading days in past 3 months shall be considered eligible. (3) Companies with minimum non-promoter holding of 10 percent as per the shareholding pattern of most recent quarter shall be considered eligible. The criteria of minimum 10 percent non-promoter holding shall not be applicable to public sector undertakings (PSUs). (4) The weightage of 75 and 25 percent shall be given to ranking on 3-monthly average market capitalisation and traded turnover, respectively, to arrive at the final ranks. While selecting top 200 companies in group 'A', following hierarchy shall be followed: (a) Companies with the final rank within top 200 continuously for preceding three rolling quarters shall be included. (b) In case, a list derived from (a) above, comprises of less than 200 companies, the companies with final rank within top 200 in preceding two rolling quarters shall be included. (c) In case, a list derived

[8]National Stock Exchange of India, Indian Securities Market–A Review, 2013.

from (a) and (b) above, comprises of less than 200 companies, the companies with final rank within top 200 in the current quarter shall be included. The 'T' group represents scrips which are settled on a trade-to-trade basis as a surveillance measure. The 'Z' group was introduced by BSE in July 1999 and includes companies which have failed to comply with its listing requirements and/or have failed to resolve investor complaints and/or have not made the required arrangements with both the depositories, *viz*., Central Depository Services (I) Ltd. (CDSL) and National Securities Depository Ltd. (NSDL) for dematerialisation of their securities. All companies not included in group 'A' or 'Z' shall constitute group 'B'. In addition to these groups, scrips may be classified in group 'T' as part of the surveillance measures[9].

NSE has classified the stocks into three categories on the basis of their liquidity and impact cost. The stocks which have traded at least 80 percent of the days for the previous 6 months shall constitute the Group I and Group II. Out of the scrips identified above, the scrips having mean impact cost of less than or equal to 1 percent are categorised under Group I and the scrips where the impact cost is more than 1, are categorised under Group II. The remaining stocks are classified into Group III. The impact cost is calculated on the fifteenth of each month on a rolling basis considering the order book snapshots of the previous 6 months. On the basis of the impact cost so calculated, the scrips move from one group to another group from the first of the next month. For securities that have been listed for less than 6 months, the trading frequency and the impact cost are computed using the entire trading history of the security.

Categorisation of newly listed securities by NSE: For the first month and till the time of monthly review, a newly listed security is categorised in that group where the market capitalisation of the newly listed security exceeds or equals the market capitalisation of 80 percent of the securities in that particular group. Subsequently, after 1 month, whenever the next monthly review is carried out, the actual trading frequency and impact cost of the security is computed, to determine the liquidity categorisation of the security. In case any corporate action results in a change in ISIN, then the securities bearing the new ISIN are treated as newly listed security for group categorisation. Instances as mentioned above shall refer to all disablements during market hours in a calendar month. The penal charge of 0.07 percent per day is applicable on all disablements due to margin violation anytime during the day.

Calculation of mean impact cost: The mean impact cost is calculated in the following manner: Impact cost is calculated by taking four snapshots in a day from the order book in the past 6 months. These four snapshots are randomly chosen from within four fixed 10-minutes windows spread through the day. The impact cost is the percentage price movement caused by an order size of ₹1 lakh from the average of the best bid and offer price in the order book snapshot. The impact cost is calculated for both the buy and the sell side in each order book snapshot.[10]

Primarily the stocks that are listed in the stock exchanges are divided into three different categories on the basis of the market capitalisation—large cap, mid cap, and the small cap. There are certain criteria that are decided by the authorities of the exchanges to determine which stocks will fall in which category.

Large Cap Stocks—These are stocks that represent the biggest and most reputed companies among all the listed companies in the stock exchange. Generally the companies that have a market capitalisation of more than ₹1000 crore are considered to be large cap companies. The stocks of these companies are categorised as

[9]www.bseindia.com.
[10]www.nse-india.com

the large cap stocks. Companies under this category are mostly in business for years and making significant growth in terms of profit and asset accumulation. This is primarily the reason that the large cap stocks are considered for including in the Nifty and SENSEX, that is, the prime index of the NSE and BSE.

Mid Cap Stocks—The mid-size businesses with moderate market capitalisation are considered to be mid cap companies. Generally those companies that have a market capital between ₹200 crore and ₹1000 crore are considered to be mid cap companies. The stocks of these companies are categorised as the mid cap stocks. The mid cap stocks have great investment proposition as they have all the sign of rising in the market and give good return on investment.

Small Cap Stocks—Generally companies with a market capital between ₹20 crore and ₹200 crore are said to be small cap companies, and stocks of these companies are considered in the small cap segment. Mostly the small cap companies are relatively new companies that have got listed at the stock market. Investing in the small cap stocks has more risk as these companies take too long to rise in the market.

19.9.3 Trading System

There are two types of market systems such as *order-driven market* and *quote-driven market* that exist in the trading of equities in the stock exchanges. The order-driven market displays all of the bids and asks, whereas the quote-driven market focuses only on the bids and asks of market makers and other designated parties. An order-driven market is one in which all of the orders of both buyers and sellers are displayed, detailing the price at which they are willing to buy or sell a security and the amount of the security that they are willing to buy or sell at that price. The biggest advantage to this system is its transparency: it clearly shows all of the market orders and what price people are willing to buy at or sell for. The drawback is that in an order-driven market, there is no guarantee of order execution whereas in the quote-driven market, there is that guarantee. In India, the stock exchanges adopt the order-driven system.

There are three different markets in which the orders are executed in the market. The details about the market are given as follows: (i) *Normal Market*: All orders which are of regular lot size or multiples thereof are traded in the Normal Market. For shares that are traded in the compulsory dematerialised mode, the market lot of these shares is one. Normal market consists of various book types wherein orders are segregated as regular lot orders, special term orders, negotiated trade orders and stop loss orders depending on their order attributes. (ii) *Odd Lot Market*: All orders whose order size is less than the regular lot size are traded in the odd-lot market. An order is called an odd lot order if the order size is less than regular lot size. These orders do not have any special terms attributes attached to them. In an odd-lot market, both the price and quantity of both the orders (buy and sell) should exactly match for the trade to take place. (iii) **Auction Market:** In the Auction Market, auctions are initiated by the Exchange on behalf of trading members for settlement-related reasons. There are three participants in this market. *Initiator*—the party who initiates the auction process is called an initiator, *competitor*—the party who enters orders on the same side as of the initiator and. *Solicitor*—the party who enters orders on the opposite side as of the initiator.

A trading member can enter various types of orders depending upon his/her requirements. These conditions are broadly classified into three categories: time-related conditions, price-related conditions and quantity-related conditions.[11]

[11]http://www.nseindia.com/products/content/equities/equities/clearing_settlement.htm

(1) Time Conditions

(i) *Day Order:* A day order, as the name suggests, is an order which is valid for the day on which it is entered. If the order is not matched during the day, the order gets cancelled automatically at the end of the trading day.

(ii) *Good till Cancelled (GTC):* A good till cancelled (GTC) order is an order that remains in the system until it is cancelled by the trading member. It will, therefore, be able to span trading days if it does not get matched. The maximum number of days a GTC order can remain in the system is notified by the Exchange from time to time.

(iii) *Good till Days/Date (GTD):* A good till days/date (GTD) order allows the trading member to specify the days/date up to which the order should stay in the system. At the end of this period the order will get flushed from the system. Each day/date counted is a calendar day and inclusive of holidays. The days/date counted are inclusive of the day/date on which the order is placed. The maximum number of days, a GTD order can remain in the system is notified by the Exchange from time to time.

(iv) *Immediate or Cancel (IOC):* An immediate or cancel (IOC) order allows a trading member to buy or sell a security as soon as the order is released into the market, failing which the order will be removed from the market. Partial match is possible for the order, and the unmatched portion of the order is cancelled immediately.

(2) Price Conditions

(i) *Limit Price/Order:* It is an order that allows the price to be specified while entering the order into the system.

(ii) *Market Price/Order:* It is an order to buy or sell securities at the best price obtainable at the time of entering the order.

(iii) *Stop Loss (SL) Price/Order:* It is the one that allows the trading member to place an order which gets activated only when the market price of the relevant security reaches or crosses a threshold price. Until then the order does not enter the market.

A sell order in the Stop Loss book gets triggered when the last-traded price in the normal market reaches or falls below the trigger price of the order. A buy order in the Stop Loss book gets triggered when the last-traded price in the normal market reaches or exceeds the trigger price of the order.

(3) Quantity Conditions

(i) *Disclosed Quantity (DQ):* An order with a DQ condition allows the trading member to disclose only a part of the order quantity to the market. For example, an order of 1000 with a disclosed quantity condition of 200 will mean that 200 is displayed to the market at a time. After this is traded, another 200 is automatically released and so on till the full order is executed. The Exchange may set a minimum disclosed quantity criteria from time to time.

19.9.4 Margin Trading

When investors place an order, they may consider purchasing the share on margin. In that case, they use cash along with funds borrowed from their broker to make the purchase. For purchasing the stocks on margin,

investors must open an account, which is called as margin account with their broker and put up some cash as collateral. The initial deposit is referred to as the *initial margin*. The investors are required to satisfy a *maintenance margin*, which is the minimum amount of the margin that they must maintain as a percentage of stocks' value (owner's equity). Investors initially satisfy the maintenance margin by depositing cash when they request the purchase of a stock. If the stock's value declines, the investor's equity value also declines, so that the investor's equity may no longer represent the minimum percentage of the stock's value required by the broker. In this case, the investor receives a *margin call* from the broker, which means that the investor is required to provide more collateral (i.e. more cash or stocks) or sell the stocks. The initial margin and actual margin is defined as follows:

$$\text{Initial margin} = \frac{\text{Amount of money investor puts up}}{\text{Total value of transaction}}$$

$$\text{Actual margin} = \frac{\text{Current value of securities} - \text{Amount borrowed}}{\text{Current value of securities}}$$

Margin call arises when the actual margin is declining below the maintenance margin.

The following example explains the process of margin call.

Example: Let the current price of the stock is ₹100, the investor wants to buy 100 shares; the initial margin is 50 percent, and maintenance margin is 30 percent. Then total value of transaction will be ₹100 × 100 = ₹10,000 and the investor must put up ₹5000 (50 percent of total transaction value) and borrowing of ₹5000 from the broker. Assume that the stock price has come down to ₹90, and then the actual margin will become: [(₹9000 – ₹5000)/₹9000] × 100 = 44.44 percent. As the actual margin is above the maintenance margin, the investor will not get the margin call. Let further the price has again come down to ₹70, then the actual margin will be [(₹7000 – ₹5000)/₹7000] × 100 = 28.57 percent. Now the actual margin has been lesser than the maintenance margin and the investor will get the margin call. The formula for calculating the price at which the investor will get the margin call is as follows:

$$\text{Margin call price} = \frac{\text{Amount borrowed}}{\text{Number of shares } (1 - \text{mainmtenance margin percentage})}$$

In the above example, the margin call price = ₹5000/100 (1 – 0.30) = ₹71.43.

19.9.5 Short Selling

It is defined as selling a stock which the seller does not own at the time of trade. This is done when the price of the security is expected to fall and sellers believe that they could be bought back later at a lower price. As the sale is at a higher price and they are bought at a lower price later, a profit can be made. Short selling is generally executed by first borrowing securities from someone who has the securities, selling them, later buying them back from the market and returning them to the lender. This is called *covered short selling*. In *naked short selling*, traders sell securities without first borrowing them. There is no certainty here that the securities will be later available for the seller to actually deliver to the buyer at the time of delivery. Naked short selling has been considered a way of manipulating the price of securities. As the short sellers can increase supply very fast, there is a rapid drop in the price of the security. Nervous investors then start closing

their long positions which continues to increase supply and there is little if any demand. The short sellers are then able to easily buy-back what they short sold at a much lower price. But the chances of default in naked short-selling are also very high as the seller may not be able to buy-back the securities from the market later due to a shortage. Naked short selling is not permitted in the Indian securities market and accordingly, all investors would be required to mandatorily honour their obligation of delivering the securities at the time of settlement. All classes of investors, *viz*., retail and institutional investors, are permitted to short sell. The following example explains how the process of short selling works:

(i) An investor thinks that stock XYZ is overpriced at ₹80 per share and will decline in the future. The investor does not own the XYZ stock, but wishes to earn profit if his expectations are correct and price goes down.

(ii) The investor instructs his brokerage firm to short 100 shares of XYZ for him, a transaction valued at ₹8000 (ignoring the brokerage cost). The brokerage firm does this by borrowing 100 shares from another investor's account, lending them to the investor and selling the shares at the current market price valued at ₹8000.

(iii) The sale proceeds of ₹8000 are credited to the investor's margin account because he sold the stock. The investor who sold short is now responsible for paying back 100 shares of XYZ stock to replace the 100 shares that were borrowed. Assume the price of XYZ stock has come down to ₹60, 2 months later. The investor now can gain ₹2000 because he can buy-back 100 shares from the market for ₹6000 and replace the 100 shares he borrowed.

19.9.6 Settlement Cycle

The National Securities Clearing Corporation Ltd. (NSCCL) clears and settles trades as per the well-defined settlement cycles. All the securities are being traded and settled under $T + 2$ rolling settlement. The NSCCL notifies the relevant trade details to clearing members/custodians on the trade day (T), which are affirmed on $T + 1$ to NSCCL. Based on it, NSCCL nets the positions of counterparties to determine their obligations. A clearing member has to pay-in/pay-out funds and/or securities. The obligations are netted for a member across all securities to determine his fund obligations and he has to either pay or receive funds. Members' pay-in/pay-out obligations are determined latest by $T + 1$ and are forwarded to them on the same day, so that they can settle their obligations on $T + 2$. The securities/funds are paid-in/paid-out on $T + 2$ day to the members' clients' and the settlement is complete in 2 days from the end of the trading day.

The settlement process is carried out by the Clearing Corporation with the help of clearing banks and depositories. The Clearing Corporation provides a major link between the clearing banks and the depositories. This link ensures actual movement of funds as well as securities on the prescribed pay-in and payout day. This requires members to bring in their funds/securities to the clearing corporation. The CMs make the securities available in designated accounts with the two depositories (CM pool account in the case of NSDL and designated settlement accounts in the case of CDSL). The depositories move the securities available in the pool accounts to the pool account of the clearing corporation. Likewise CMs with funds obligations make funds available in the designated accounts with clearing banks.

The clearing corporation sends electronic instructions to the clearing banks to debit designated CMs' accounts to the extent of payment obligations. The banks process these instructions, debit accounts of CMs and credit accounts of the clearing corporation. This constitutes pay-in of funds and of securities. After processing

for shortages of funds/securities and arranging for movement of funds from surplus banks to deficit banks through RBI clearing, the clearing corporation sends electronic instructions to the depositories/clearing banks to release pay-out of securities/funds. The depositories and clearing banks debit accounts of the Clearing Corporation and credit accounts of CMs. This constitutes pay-out of funds and securities. Settlement is deemed to be complete upon declaration and release of pay-out of funds and securities.

An online facility to close out open positions of members in the capital market segment whose trading facility is withdrawn for any reason, has been provided with effect from 13 June, 2007; on disablement, the trading members will be allowed to place close-out orders through this facility. Only orders which result in reduction of existing open positions at the client level would be accepted through the close-out facility in the normal market. Members would not be allowed to create any fresh position, when in the close-out mode, to place close out orders with custodial participant code and to close out open positions of securities in trade for trade segment.

19.9.7 Index-Based Market-Wide Circuit Breaker

The index-based market-wide circuit breaker system applies at three stages of the index movement, either way, *viz*., at 10, 15 and 20 percent. These circuit breakers when triggered bring about a coordinated trading halt in all equity and equity derivative markets nationwide. The market-wide circuit breakers are triggered by movement of either the BSE Sensex or the NSE CNX Nifty, whichever is breached earlier. The market shall re-open, after index-based market-wide circuit filter breach, with a pre-open call auction session. The extent of duration of the market halt and pre-open session is as follows:

Trigger limit	*Trigger time*	*Market halt duration*	*Pre-open call auction session post market halt*
10%	Before 1:00 pm.	45 Minutes	15 Minutes
	At or after 1:00 pm up to 2.30 pm	15 Minutes	15 Minutes
	At or after 2.30 pm	No halt	Not applicable
15%	Before 1 pm	1 hour 45 minutes	15 Minutes
	At or after 1:00 pm before 2:00 pm	45 Minutes	15 Minutes
	On or after 2:00 pm	Remainder of the day	Not applicable
20%	Any time during market hours	Remainder of the day	Not applicable

Exchange shall compute the Index circuit breaker limits for 10, 15 and 20 percent levels on a daily basis based on the previous day's closing level of the index rounded off to the nearest tick size.

19.10 MAJOR POLICY DEVELOPMENTS IN EQUITY MARKET IN INDIA

This section lists the major recently adopted/mooted procedural, institutional, fiscal measures/reforms to develop the Indian stock market, particularly the equities market.

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Describe major policy developments in equity market in India

- The SEBI approved in February 1997 the creation of the Trade Guarantee Fund (TGF) by the BSE, which will guarantee settlement of *bonafide* transactions of BSE members.
- The BSE has decided to set up a 'BSE Bank' to meet the financial requirements of stock brokers.
- An introduction of the Stock Lending Scheme (SLS) has been approved by the authorities. The SLS enables the seller of securities to borrow them physically, for a fixed or specific period from the entities which possess them and to deliver them to the buyer at the time of settlement against the outstanding commitments. The borrower of the securities pays the lender interest on the value of the stock borrowed. The borrowers are usually the brokers, speculators, market makers and jobbers; and the lenders are usually institutional investors, FIs, mutual funds and high net worth individuals with large inventory of shares. There is a stock lending intermediary who regulates the activities of the borrowers and lenders. The lender does not part with the ownership of the stocks; he continues to receive the dividends declared on such stocks. The SEBI has announced certain guidelines in February 1997 to make SLS operational.
- Depositories and custodial services have been created to facilitate and simplify securities trading.
- FIIs have been permitted to invest in the Indian capital market since September 1992. There is no doubt that the buying and selling of shares by FIIs have had a major impact on the movement of share prices in India; their volatility has sharply increased due to FIIs participation in securities trading.
- Almost all the SEs had introduced screen-based trading.
- The National Securities Clearing Corporation (NSCC) has started guaranteeing all trades in NSEI since July 1996.
- About SEs have set up clearing houses/corporations by the end of 1997.
- The rates of corporate tax and capital gains tax have been significantly reduced. The 1997–1998 budget fixed the former at 35 percent for both public and private limited companies, and the latter at 10 percent for NRIs and FIIs. It also abolished the dividend tax on the dividend income in the hands of the shareholders.
- The fixation of prices of shares and premium on them has been decontrolled. The SEBI has introduced a 'market-based pricing' or 'free pricing' system in the recent past.
- Non-Resident Indians (NRIs) and OCBs are allowed to buy shares and debentures with prior permission of the RBI. NRIs, OCBs and FIIs are permitted to invest up to 30 percent in equities of the Indian companies engaged in all activities except those of agriculture and plantations.
- New instruments such as Stock invest and many hybrid claims have been introduced in the recent past.
- The mandatory minimum percentage of public issues to be offered to the public has been reduced recently from 60 to 25 percent.
- The minimum number of shares to be applied for has been increased from 100 to 500.
- Companies are now required to disclose all material facts and special risk factors associated with their projects while making the public issues.
- Mutual funds and other financial institutions are allowed to apply for firm allotments in the public issues.
- All the intermediaries, agencies, organisations concerned with the functioning of the capital market have been brought within the regulatory framework of the SEBI. Prudential norms are introduced, procedures for public issues, securities transfer, and so on, have been simplified. Governing boards of stock exchanges have been reconstituted. Capital adequacy norms for brokers have been introduced and guidelines for pre-issue and post-issue obligations, underwriting and capital structure have been given.
- Companies are now allowed to issue non-voting shares (NVS) up to 25 percent of their share capital.
- Efforts are afoot to integrate the money and capital markets through a free flow of funds of the banks, LIC, GIC, mutual funds, provident funds, pension funds and other trusts to the share market. Accordingly,

rules regarding the investment of the incremental resources of the above-mentioned organisations in the equities have been either already liberalised or are in the process of being liberalised. For example, banks are now encouraged to involve themselves more and more in the primary and secondary markets. The ceiling on their investments in PSU bonds has been removed. They can now invest 5 percent of their incremental deposits of the previous year in equities. They can acquire shares on the secondary market; they can lend to corporates against the shares, and they are now more open to financing brokers.

- The companies have been permitted from 1997 to 1998 to buy-back their own shares by using funds out of their free reserves, securities premium account, and the proceeds of the prior issue made specifically for the purpose of a buy-back. There has been a growing tendency towards buy-back of their own shares by the companies, delisting of shares and conversion of public limited companies into private limited companies. The various hypotheses such as surplus cash, underpricing and capital structure hypotheses have been advanced to explain why the firms buy-back their own shares. Generally, it has been observed that the stock market reacts positively to share repurchase agreements or buy-back announcements.
- The market participants interpret such announcements/agreements as evidence that the firm is underpriced, which results in the upward revision of company share price for various reasons. First, it is believed by the market that the companies initiate buy-back of their shares when they regard that their shares are underpriced in the market. Second, the shares buy-back provides the managers with an avenue to distribute excess cash or surplus capital to the shareholders, thereby, reducing the possibilities of wasteful expenditures (for purposes like perquisites, empire building and negative net present value projects), which, in turn, increases the value of the firm. Third, the shares buy-back may be motivated by attempts to fend off hostile takeover threats and to avoid dilating impact of share options on per share value of outstanding shares. Fourth, the desire to maintain an efficient balance sheet or to attain optimal capital structure may also encourage shares repurchases. If the management believes that the optimal leverage ratio exists for its firm, it may use buy-back as a means of achieving the optimum or target leverage ratio. Fifth, the desire to increase earnings per share may also be the reason behind the buy-back of shares by certain firms.
- The SEBI has issued certain guidelines to be followed by companies if they want to buy-back their shares: The Boards of Indian companies would have to confirm that they are in a position to discharge all their debt obligations. This is necessary to protect debt exposure of banks, FIs and individual investors. (b) Companies are required to give 7 days prior notice to SEs for any proposal to consider buy-back at a board meeting. (c) The decision of the board has to be communicated within 15 minutes of the conclusion of the meeting. (d) Within 2 days of passing the board resolution, the company has to file a certified copy of the resolution with SEBI and SEs and issue a public notice in newspapers giving details as prescribed by SEBI. (e) The consent of shareholders is mandatory for buy-back.
- In 2003, SEBI established Central Listing Authority (CLA) to streamline the listing process. The CLS would consist of a president and not more than 10 members who would be appointed by SEBI. The authority would constitute a fund, and no exchange can consider any listing application unless it is accompanied by a letter of recommendation from the CLA. It is expected to bring about uniformity in the exercise of due diligence in scrutinising listing applications and listing agreements.
- In late 1990s and thereafter, we have witnessed a phenomenon of many multinational and other companies in India and abroad delisting their shares from the stock market after buying back their shares from shareholders and ceasing to be public limited companies and becoming private limited companies.

For doing so, many companies have taken advantage of the crash in the stock market in 2000 and 2001. If this trend becomes widespread, the universe of listed stock would rapidly shrink and the investors would be left without quality stock to invest in. There are many reasons, motivations, driving forces behind this new trend. They are as follows:

- Certain companies no longer feel the need to raise money from the market.
- Their earlier listing was on account of government policy requirement. With changes in government policies, they prefer to work as private companies. If there were no government listing regulations, some of these companies would never have listed on the stock market. For example, in 1980s and 1990s, MNCs were forced to go public and reduce their stake in their Indian subsidiaries from 100 to 40 percent. In the post-liberalisation period, MNCs have been allowed to increase their stake in Indian companies up to 74 percent and even 100 percent in certain areas.
- A desire for freedom to operate without any interference from either the shareholders or the regulator. Some companies wish to be free from lawsuits, pressures, protests of the shareholders.
- When the stock market is in crisis in which the share prices of many companies are at their nadir, the companies may not see any advantage in remaining public and may, therefore, choose to delist and go private. The companies think that through delisting, they can ward off disadvantages associated with low share prices and poor liquidity which can trigger an unwanted hostile takeover bid.
- By delisting and going private, the companies think that they get flexibility to restructure their business without being accountable to shareholders and regulators. The increasing requirements of stock exchanges in terms of disclosures, and the increasing thrust on corporate governance may motivate companies to delist and go private.
- Given the high cost associated with listing, the option of going private enables companies to avoid financial and other costs associated with being a public entity.
- In the depressed phase of the stock market, the promoters can buy-back their shares at low prices (i.e. at low acquisition cost) and then delist those shares.

- SEBI has come up with guidelines/norms for delisting of companies with a view to protect shareholders. It has issued two sets of norms: (a) SEBI (Delisting of securities) Guidelines 2003, and (b) SEBI (Central Listing Authority) Regulations 2003. These norms are in force w.e.f. mid-February 2003. These guidelines are as follows:
  - The national and regional stock exchanges are vested with the authority to monitor the possibility of price manipulations and keep a watch on the securities that announce delisting.
  - The guidelines make it compulsory for companies to determine the exit price for delisting of securities in compliance with the book-building process, also known as reverse book-building through an electronically linked transparent facility.
  - The offer price would be the average of 26 week-traded price preceding the date of announcement of delisting. The final offer price is determined as the price at which maximum number of shares has been offered.
  - The promoters or the acquirers of companies who wish to delist their stock should obtain prior permission of the investors through a special resolution passed at the general meeting.
  - Delisting would be permitted only if the company is listed for a minimum period of 3 years.
  - The shareholders would be given an exit opportunity and the exit price would also be determined in accordance with the book-building process.

- The organisation of the stock market is undergoing a drastic change at present; the process for such a change has already begun in 2002 and 2003. So far, SEs in India were either 'clubs' or 'trusts', or 'associations', or 'mutual organisations'. But they are in the process of being converted into companies with their shares being listed on other SEs. This has come to be known as demutualisation and corporatisation (DC) of the Indian SEs. The SEBI has opted for a uniform model of DC in which all SEs would be converted into publicly held companies limited by shares, and their character would be changed from 'not-for-profit' to 'for profit' entities. The new form of organisation of SEs would separate trading rights from ownership rights of the members. At present, SE members elect representatives from amongst themselves to run the SE and regulate their own activities. Under such arrangements, it has been experienced that the SEs do not take actions against their erring members. There is a conflict of interests and lack of professionalism in the current organisational model. Under the new dispensation, the SE Companies would appoint a non-broker Chairman and the Chief Executive Officer for a day-to-day working. The membership cards would be scrapped, and the members would be issued shares and would be asked to pay deposit to secure trading rights. The governing board would comprise of brokers, shareholders and investors to be represented equally. Any single equity or a group of related entities would not have more than 5 percent of voting rights. After DC, in all SEs, financial institutions, the Board of Directors and traders would own, manage and use the services of the SEs. The existing members would have to give up their trading or ownership rights.
- There is a move to set up a new stock exchange in India known as 'Indonext Exchange (IE)' (on line with 'Euronext Exchange' in Europe) to help regional SEs to survive. The background and the proposal are as follows: In 1990s, there was an increase in the number of Regional Stock Exchanges (RESs) and there was also a creation of Interconnected Stock Exchange (ICSE) to weave these RSEs together. But this development succeeded only for a short while and by 2003, many of RSEs had zero or near-zero turnover. The causes of this need to be understood well:
  - The RSEs have a theoretical basis in the fact that for a vast country like India, a decentralised development of stock market is supposed to be good for balanced regional development. At the same time, it is to be noted that the local, regional, semi-urban and even urban investor (as opposed to metropolitan investor) is risk-averse and he suffers from lack of expertise, knowledge, analytical skills, adequate, quick information required for investment in shares. The market size of RSEs remains small. The RSEs could not sustain when the national stock market itself became depressed. The decline in RSEs reflects the crisis and stagnation in the national stock market, which, in turn, has been the result of industrial recession and stock markets scams, which have destroyed the investor confidence thoroughly.
  - The BSE and NSE did not leave the space for RSEs to grow; in their anxiety to show their own growth, they occupied greater and greater space which naturally belonged to the RSEs. The BSE and NSE increased their own trading facilities in increasing number of centres, which was made possible by the spread of computerisation and information technology. RSEs could not face the competition from the BSE and NSE.
  - The new trend of many companies delisting their shares also has adversely affected both the national SEs and RSEs.
- Indonext would be an exchange where all companies with paid-up capital of up to ₹20 crore will be traded exclusively. Such companies cannot list on the BSE and NSE, and if they are already listed on them, they will have to delist from there and list with respective RSE. RSE stock brokers will automatically

become members of Indonext. The concept is based on Euronext Exchange which was formed in 1999 by merging the Paris, Amsterdam, Lisbon and Brussels stock exchanges. The Indonext is expected to consolidate stock exchanges in India and create a Pan-India trading system in which there would be a common order book which could be accessed by any of the stock brokers of the SEs participating in the Indonext.

- By 2003, all the listed scrips have been put in the list for compulsory settlement of trade in dematerialised form for all investors. There are two conflicting views about this dematerialisation of securities and depository system. According to one view, dematerialisation of shares is becoming popular with the investors and companies. It reflects fast pace in institutionalisation of paperless trading in securities. It has provided systemic benefit to the Indian securities market. Dematerialisation eliminated risk arising out of forgery, fake certificates, stolen shares, transit loss, and so on, and it has increased the pace of transfer of securities. Many others are not so sanguine. According to them, in India, the small long-term investors are finding the system so costly that they are tending to quit the equity market in large numbers. The depository system has belied the official and others' expectations about it. It was expected to reduce risk, lower transaction costs and other higher investor protection and service for the vast majority of market participants. However, actually, the system has cheated the vast majority of market participants. The share depository service in India has not evolved as a voluntary commercial service; it has evolved as a compulsory bureaucratic requirement prescribed by SEBI for trading shares. Compulsory dematerialisation and allowing depositories to exploit their near-monopolistic position by charging very high fees have robbed investors of their money.
- India has emerged as one of the five countries in the world which have introduced $T + 2$ trading system. The Indian capital market has witnessed a radical transformation in its trading and settlement system. Earlier, there was a carry forward system in which deals could be carried forward up to as many as 90 days. Those who did not carry forward their trades could settle them at the end of same period or at the end of trading cycle which was not a rolling system and which was of 10–14 days duration. Up to June 2001, the Indian Secondary capital market was characterised by Account Period Settlement System (APS) in which trades executed within a given period, say a fortnight or a week, were netted and settled at the end of that period on a specified day. In mid-1990s, the trading cycle was reduced from fortnight to a week. With effect from 2 July, 2001, all scrips that were traded under the 'carry forward mechanism' or '*badla* system' or 'automatic lending and borrowing mechanism (ALBM)' of NSE and 'borrowing and lending of securities system (BLESS)' of BSE or 'deferred trading system (DTS)' were replaced by 'compulsory rolling settlement system (CRSS) uniformly on all the SEs. This measure meant the end of 135-year old '*badla* system of trading' in India The $T + 2$ rolling system would have the following beneficial effects on the capital market: (a) It would reduce the risk of default. (b) It would enhance the liquidity in the market. (c) It may help to achieve true price discovery in the market. (d) It may reduce speculative trading. (e) It may reduce price fluctuations and market volatility. (f) It may increase market safety. (g) It may reduce market manipulations. (h) It may reduce malpractices, cheating, corruption and scams in the capital market. (i) It may help to increase transactions volumes and trading turnover in the market. (j) It may enhance the integrity of the market. (k) It may curb rampant inter-exchange arbitrage, which, among other things, was responsible for stock market scams.
- These beneficial effects of the Rolling Settlement System (RSS) are due to its certain advantageous features. They are as follows: (i) Unlike in an APS, where the settlement of trades done for a number of specified days was effected on a single day, in rolling settlements, the settlement of trades is evenly

spread across all trading days. This reduces undue concentration of payment of monies and delivery of securities on a single day. (ii) As the settlement is spread across evenly, it results in efficient utilisation of infrastructure and system capacity. (iii) In rolling settlements, the time lag between the trade execution and settlement is substantially reduced which results in lowering of the outstanding market positions. Consequently, the risk of the Exchange on member-brokers for the outstanding positions gets substantially reduced. Similarly, the risk of the clients on the member-brokers and *vice versa* also gets substantially reduced. (iv) It may ensure efficient utilisation of monies and securities by the investors and, thus, adds to the overall efficiency of the market. (v) Tracking of beneficial ownership, for the purpose of corporate dividends and other benefits, is much simpler in case of rolling settlements compared to APS.

- In the recent past, the companies have been trying to make Employees' Stock Options (ESOPs) as a key element of compensation package for the employees or as a means to retain their able employees. ESOPs are primarily a commitment made by a company to its employees for offering a limited number of company's shares at a set price for a set period of time. Sometimes, the strike price of stock options falls below the market price. Such stock options are known as 'underwater ESOPs'. The instability and decline in the stock market during 1990s saw fortunes of investors dwindling. However, employees were protected from the loss by 'repricing' of 'underwater ESOPs'. Such a 'repricing' means issuing new stock options at the existing market price in place of ESOPs whose strike price had fallen below the market price. The repricing is generally done by means of cancelling the existing ESOPs, and issuing a 'regrant' at a lower exercise price, or by amending an outstanding 'underwater ESOP' to reduce its existing price.
- In order to provide an additional route for raising funds in the domestic market, SEBI permitted listed companies to raise funds in the form of 'Qualified Institutional Placement' (QIP).
- The Investor Protection Fund (IPF) has also been set up by the stock exchanges to protect the interests of investors. The exchanges maintain an IPF to take care of investor claims, which may arise out of non-settlement of obligations by the trading member, who has been declared a defaulter, in respect of trades executed on the exchange. Measures of investor protection that have been put in place over the reform period have led to increased confidence among investors. The World Bank in its survey of 'Doing Business' has worked out an investor protection index, which measures the strength of minority shareholders against directors' misuse of corporate assets for his/her personal gain (World Bank, 2006). The index is the average of the disclosure index, director liability index and shareholder suits index. The index ranges from 1 to 10, with higher values indicating better investor protection. Based on this index, India fares better than a large number of economies, including even some of the developed ones such as France and Germany.
- Corporate governance has emerged as an important tool for protection of shareholders. The corporate governance framework in India has evolved over a period of time since the setting up of the Kumar Mangalam Birla Committee by SEBI. According to the Economic Intelligence Unit Survey of 2003, in terms of corporate governance across the countries, India was rated the third best country to have good corporate governance code after Singapore and Hong Kong. To improve the availability of information to investors, all listed companies are required to publish unaudited financial results on a quarterly basis. To enhance the level of continuous disclosure by the listed companies, SEBI amended the listing agreement to incorporate segment reporting, related party disclosures, consolidated financial results and consolidated financial statements. Regulations governing substantial acquisition of shares

and takeovers of companies have also been put in place. These are aimed at making the takeover process more transparent and to protect the interests of minority shareholders.

- Security Exchange Board of India (SEBI) introduced e-IPO concept into the Indian primary market on 4 October, 2012. The objective to this event was to simplify the process of issuing IPOs, lower their costs and increase their level of penetration among retail investors.
- On 4 January, 2013, the SEBI introduced the facility for intermediaries to be able to verify the permanent account number (PAN) of their clients online on the Income Tax website without insisting on the original PAN card, provided the client has presented a document other than the PAN card for proof of identity.
- Security Exchange Board of India (SEBI) introduced Rajiv Gandhi equity saving scheme on 6 December, 2012. The objective of this scheme is to encourage the flow of savings of small investors into the domestic capital market and present investors with tax benefits. This scheme allows small investors to purchase shares only in the top 100 stocks traded on Bombay Stock exchange and National Stock Exchange.
- The SEBI has allowed mutual fund (MF) distributors on 4 October, 2013 to use the infrastructure of the stock exchanges for the purchase and redemption of mutual fund units directly from AMCs on behalf of their clients. Prior to this, the facility was available only for stockbrokers and clearing members.
- On 4 September, 2013, SEBI adopted global norms for financial market infrastructures to enhance safety and efficiency in the payment, clearing settlement arrangements, reducing the systemic risk, fostering transparency and financial stability and protecting market participants and investors.

19.11 CRITICAL APPRAISAL OF THE MEASURES TO DEVELOP EQUITY MARKET

LO 7
Review the measures to develop equity market

The foregoing array of measures constitutes an impressive and powerful policy package indeed. Although some of these measures are welcome, the diseased, pathological state of the Indian stock market reflected in its legion of weaknesses, drawbacks and malpractices, and its depressed state during the past 3 years notwithstanding these measures, cast serious doubts on its future potential. We briefly examine the above listed measures as a whole to develop the basics of a counter-culture in Indian finance.[12]

(1) Limited Growth of Equity Market in India: There are a number of important and sensible reasons why the growth of equity market ought to remain limited in India. First, there are clear limits to the growth of the corporate sector, as of the whole economy. The call for an ever-increasing mobilisation of funds on the capital market for an ever-increasing investment expenditure for an ever-increasing rates of corporate growth can result only in over-investment, overheating and business cycles in the economy. Second, compared to other financial markets, the equity market, particularly the secondary market, is a greater threat to the economic stability of the country. The Indian equity market has been a veritable threat to the financial and corporate stability due to its being excessively speculative and volatile nature. Due to the entry of FIIs, NRIs and due to greater international financial integration, the volatility of the equity market has increased further. Third, the channelisation of more and more savings through the equity market would mean a progressive decline in the direct scope and coverage of monetary policy, and, therefore, a decline in its effectiveness. Fourth, in the Indian economy, small, village, cottage, home industry, agriculture, and the activities in the informal,

[12]For elaboration, see Bhole, L M, *Financing of the Private Corporate Sector: Trends, Issues, and Policies*, Himalaya Publishing House, Mumbai, 2000.

unorganised, small sector have a crucial role to play, but they cannot access the equity market. The sectoral and regional balance in the flows of funds depends, *inter alia*, on only a limited growth of the equity market.

(2) Role of Banks and NBFIs in the Equity Market: What role should banks and non-bank financial institutions (B & NBFIs) play in the equity market? The recent policy allowing banks to invest (lend) in (against) shares may soon pose problems for the authorities. Not long ago (in April 1995), banks were advised to desist from acquiring shares and debentures on the secondary market because they were not permitted to trade there. This policy was reversed in October 1996 when the banks were allowed to trade on the secondary market. Similarly in December 1996, B & NBFIs were directed to buy shares on the secondary market to revive the SENSEX. The ambivalence, the dithering approach and the pre-occupation with the SENSEX which these policy changes reflect can jeopardise the long-run safety, soundness and viability of the Indian financial system. The commercial banks are specially important for the stability of the financial system. The involvement of banks in the equity market, therefore, is a nostrum for destabilising the system. The policy of maintaining a distance between them for more than 100 years has stood the test of time. At this very juncture, when the authorities are struggling to rebuild a viable banking system, its undue involvement with the equity market may best be avoided. The corporate demand for channelising more institutional resources into equities is guided purely by self-interest. As the institutional investments are bound to be block investments, the corporates want the voting or controlling powers of institutions to be limited. Already there is a widespread practice of promoters and managements controlling companies and enjoying vast economic power without investing much of their money. It would result in the further entrenchment of this practice if B & NBFIs are encouraged to invest in corporate shares but are not allowed to participate in the governance of companies.

Further, in the post-liberalisation period, B & NBFIs have started mobilising a part of their own resources through the stock market, which the companies do not like. They want B & NBFIs to invest in their shares, but not to compete with them on the share market. In other words, the corporates want B & NBFIs to invest more in equities from the created money, or the budgetary and RBI support, or the funds mobilised from sources which corporates cannot access. This is certainly a nostrum for creating the price and financial instability and the sectoral and regional imbalances in the supply of finance. Therefore, the policy of integrating the equities market with B & NBFIs should not be pressed. B & NBFIs may invest a part of their resources in the primary market strictly as the long-term investment, but they should not invest much in trading on the secondary market. They should not be required to stabilise SENSEX or any similar index. To ask B & NBFIs to involve themselves significantly in the equity market is to load them with functions they cannot and should not perform. The governments abroad do not allow B & NBFIs to purchase much equity for reasons of financial stability and security. Many experts there have strongly argued that more than a marginal involvement of B & NBFIs in the equity market would destabilise the financial system.

(3) Objections to the Policy of Developing Equity Market with Fiscal Concession: The policy of developing the equity market with the special fiscal concessions is also objectionable on many counts. The argument that the equity investment deserves special tax treatment because it is more risky is not really convincing. The higher and regular reward for the greater risk-bearing must come from the good, improved economic and financial efficiency and productivity of the companies and not through the artificial tax props. To build a tax-incentives-disincentives regime which seeks to frown upon the long-term, natural preferences of the savers in a given society (debt instruments in India), and to create preferences for certain other claims (equities) artificially are unhealthy and unnecessary steps. Tax props have a tendency to multiply, which

tends to reduce tax coverage and aggravate the problems of low tax revenue, larger public debt and higher budgetary deficit. Giving tax concessions to the equity holders amounts to providing indirect subsidy, which is iniquitous. At this juncture, when the government is struggling hard to reduce fiscal deficit and subsidies, and to build a sustainable fiscal regime, it is best to minimise special fiscal concessions for developing the equity culture. It is necessary to recognise the important trade-off between corporate finance and government finance which exists in this context.

The argument that the investment in shares suffers from double taxation also cannot stand scrutiny. The taxation of company income and dividend income separately is unavoidable because companies and shareholders are two separate, independent entities or 'persons' in the eyes of the law. They have separate rights and liabilities. Companies and shareholders should be treated either as different for all purposes or one in all respects. If we treat them as one for all purposes, there would not be a need for their separate taxation, but then there would not be a 'limited liability' also for the shareholders, as is the situation in the case of proprietorship and partnership business. To achieve neutrality among different forms of business organisation selectively would be a wrong public policy. Further, the serious implications of the integration of taxation of the shareholders and companies in the case of closely held companies also ought to be kept in mind before such a policy is implemented. Does the so-called double taxation of dividends lead to a greater retention of net earnings by the companies as has been argued by some people? There is no empirical evidence to support this position in India. One of the sound tenets of financial development is that those financial instruments should be designed and promoted which meet the preferences of the investors. Given the fact that an overwhelmingly large body of investors in India generally prefers debt instruments, it would be wrong to favour equities and disfavour debt instruments through fiscal concessions.

(4) Interest Rate Policy for Promoting Equity Investment: It follows that the interest rates policy which has been designed partly to promote equity investment needs to be changed. For long, interest rates on bank deposits have been kept at a relatively low level to obviate the need for raising the lending rates too much. To continue it 'because the average rate of return on equities has remained low' is to put premium on inefficiency, or to make small savers subsidise equity capital, or to impose an 'equity tax' on bank depositors. There is also a need to raise interest rates on debentures suitably.

In this context, the 1997–1998 budgetary provision to abolish dividend tax without providing a corresponding tax-relief to the earners of interest income is difficult to comprehend. It needs to be realised that such fiscal concessions along with the policy of low interest rates favour the rich and disfavour the low- and middle-income groups. Seventy percent of shares in India are held by the corporate bodies, financial institutions, foreigners, directors and top 50 individual holders. Among the individuals who hold the remaining 30 percent also, the majority belongs to the upper-, middle- and rich-income groups. It has been found in the United States also that although the percentage of American population that owns common stock directly or indirectly has quintupled between 1952 and 1990, the richest 0.5 percent of the American population owns 31 percent of the total US stock; the richest 10 percent owns 89 percent and the poorest 90 percent owns 11 percent of the shares. There is no doubt that to favour equities is to favour the very rich.

(5) Role of Secondary Market Activities in the Economy: It is imperative to develop a balanced perspective on the place of the secondary securities markets in the economy. In theory, they are required to facilitate, support, enable the healthy growth and functioning of primary markets, as the very words, primary and secondary, convey. The current focus of thinking on the CFS, SENSEX, market capitalisation, and so on, reflects an excessive pre-occupation with the secondary market activity. Beyond a point, the expansion of the

secondary markets may reduce the volume of activity not only on the new issue market but also in the banks, other financial institutions, gold, real estate and commodities. The concept of the production possibility curve, that is the inevitability of the need for making a choice, is quite relevant in respect of the expansion of different segments of the financial markets also, given the constraint of community savings.

19.12 OVERVIEW OF EQUITY MARKET IN INDIA

The equity market size in terms of market capitalisation, in India has expanded mostly because of change in financial technology, followed by change in macroeconomic fundamentals, while change in institutional efficiency had no impact on the market size (Li, 2007). Number of domestic listed companies has increased throughout the period (Table 19.4). The turnover ratio (TOR), which equals the total value of shares traded on a country's stock exchange divided by stock market capitalisation, is a commonly used measure of trading activity or liquidity in the stock markets. The turnover ratio measures trading relative to the size of the market. All things equal, therefore, differences in trading frictions will influence the turnover ratio. Another related variable is the value-traded ratio (VTR), which equals the total value of domestic stocks traded on domestic exchanges as a share of GDP. This ratio measures trading relative to the size of the economy. Both TOR and VTR have improved significantly as compared to the early 1990s. These ratios touched high levels in the years 2000 and 2009. This, however, largely reflected the impact of sharp rise in stock prices due to the IT boom and the recovery from the financial sector crisis. The price effect may lead to an increase in the liquidity ratios by boosting the value of stock transactions even without a rise in the number of transactions or a fall in transaction costs. Further, liquidity may be concentrated among larger stocks (Table 19.4).

Table 19.4 Select stock market indicators of India

Year	*No. of domestic listed companies*	*Market capitalisation as percentage of GDP*	*Total cash segment turnover as percentage of GDP*	*Turnover ratio*	*Value-traded ratio*
1991	—	19.4	—	32.7	6.3
2000	—	46.8	—	167	78.1
2005	4763	54.3	54.3	97.7	53.1
2006	4796	84.7	66.76	78.9	66.9
2007	—	86.5	70.02	81.8	89.4
2008	—	55.7	109.32	85.2	85.8
2009	4996	85.6	69.10	116.3	79.8
2010	4987	93.6	89	75.6	61.9
2011	5112	54.2	60.1	56.3	39.4
2012	5191	68.6	38.8	54.6	33.5
2013	5211	67.6	32.2	43.4	29.4
2014	5336	74.0	29.5	38.6	28.5
2015	5624	94.1	41.5	43.6	41.0
2016	5911	86.6	36.7	32.4	28.0

Source: RBI, RCF, SEBI-Handbook 2013, 2014, 2016 Securities Market in India: Overview.

Table 19.5 Resource mobilisation in the primary equity market

Year	*Public issues*		*Right issues*	
	No.	*Amount (Crores)*	*No.*	*Amount (Crores)*
2001–2002	20	6501.81	15	1041.26
2002–2003	14	3638.68	12	431.61
2003–2004	35	22,265	22	1007
2004–2005	34	24,640	26	3616
2005–2006	103	23,294	36	4088
2006–2007	85	29,797	39	3711
2007–2008	92	54,511	32	32,518
2008–2009	21	2082	25	12,637
2009–2010	44	46,736	29	8319
2010–2011	58	48,654	23	9503
2011–2012	35	10,482	16	2375
2012–2013	33	6528	17	8945
2013–2014	40	8692	15	4576

Source: SEBI Annual Reports.

Notes: (1) No. refers to the number of issues of the instrument. (2) Amount refers to the issues amount of the instrument in rupees (crore).

From the Table 19.5, it is evident that the resource mobilisation through public and right issues has increased from the year 2001–2002 to 2006–2007 in terms of number of issues and amount, but it has significantly come down during the year 2008–2009. It could be due to the financial crisis during the said year. After that it has revived up to the year 2010–2011, but again it has shown a declining trend. Table 19.6 reflects the growth of the two major stock exchanges BSE and NSE in India in terms of listed companies, market capitalisation ratio, turnover ratio and traded value ratio. During the period 1995–2013, the number of listed

Table 19.6 Selected indicators of BSE and NSE

Year	*Listed firms (Number)*		*Market capitalisation/ GDP (%)*		*Turnover ratio (%)*		*Traded value ratio (%)*	
	BSE	*NSE*	*BSE*	*NSE*	*BSE*	*NSE*	*BSE*	*NSE*
1995	4702	135	46.3	—	14.5	—	6.7	—
1996	5603	422	47.5	33.8	8.9	16.5	4.2	5.7
2000	5815	720	47.1	52.7	75.2	82.2	35.4	43.3
2001	5869	785	27.4	31.5	175.0	203.6	47.9	64.1
2002	5782	793	26.9	28.0	50.2	80.6	13.5	22.6
2003	5650	818	23.3	21.9	54.9	115.1	12.7	25.1
2004	5528	909	43.4	40.6	41.9	98.1	18.2	39.8

(*Contd.*)

2005	4731	970	52.4	48.9	30.5	71.9	16.0	35.2
2006	4781	1,069	81.8	76.2	27.0	55.8	22.1	42.5
2007	4821	1,228	82.6	78.4	27.0	57.8	22.3	45.3
2008	4887	1,381	103.0	97.4	30.7	73.1	31.7	71.2
2009	4929	1,432	55.3	51.9	35.6	95.0	19.7	49.3
2010	4975	1470	94.1	91.7	22.4	68.9	21.0	63.2
2011	5067	1574	94.1	92.2	16.2	53.4	15.2	49.2
2012	5133	1646	110.4	108.3	10.7	46.1	8.0	33.6
2013	5211	1666	73.2	71.5	5.9	29.2	4.3	20.9

Source: SEBI-Hand book of Statistics 2005, 2013 and 2014.
Notes: Turnover Ratio = (Turnover/Market Capitalisation) and Traded Value Ratio = (Turnover/GDP)

companies has increased from 4702 to 5211 in the case of BSE and for NSE it has increased from 135 to 1666. Market capitalisation to GDP ratio has increased continuously during 1995–2008 and after that it has shown a fluctuating trend. It could be due to the financial crisis in the global economy and the change in the government in the context of India. The turnover ratio and traded value ratio were highest in the year 2001 and after that both the ratios have declined continuously in both the stock exchanges. This implies that there is the problem of liquidity in the stock market for a reasonable period of time, which has also larger implications on the growth process of the economic growth.

Table 19.7 presents the certain characteristics of two major stock market indexes in India. The volatility in both the stock exchanges has been fluctuating within the range of 0.8 percent and 2.8 percent. The price earnings ratio and price to book ratio figures imply that the market has been growing and there is growth opportunity existing in the market. The stock markets worldwide have grown in size as well as depth over the years. It can be observed from (Table 19.8). It is significant to note that the United States alone accounted for about 43 percent of worldwide turnover in 2012. Despite having a large number of companies listed on its exchanges, India accounted for a meager 1.3 percent in total world turnover in 2012. The market

Table 19.7 Stock market index, volatility and P/E ratio

Year	*CNX-NIFTY*				*SENSEX*			
	Volatility (%)	*P/E ratio*	*P/B Ratio*	*Dividend yield*	*Volatility (%)*	*P/E ratio*	*P/B Ratio*	*Dividend yield*
2000	1.98	24.7	4.48	1.06	1.72	19.72	2.82	1.56
2001	2.0	17.05	3.72	1.14	2.2	17.55	2.57	1.85
2002	1.4	18.25	2.93	1.33	1.5	13.74	2.14	2.28
2003	1.0	13.44	2.16	2.91	1.0	18.55	3.5	1.81
2004	1.4	21.27	3.59	1.72	1.4	16.05	3.82	1.69
2005	1.6	14.84	3.88	1.94	1.5	20.05	4.92	1.29
2006	1.0	20.68	5.26	1.3	1.0	19.84	4.95	1.28
2007	1.8	17.49	4.63	1.31	1.8	20.18	5.19	1.07

2008	2.0	20.66	5.09	1.06	1.9	12.68	2.47	1.92
2009	2.7	14.49	2.53	1.83	2.8	21.05	3.85	1.12
2010	1.9	22.52	3.73	0.93	1.9	20.04	3.46	1.13
2011	1.1	22.11	3.7	1.07	1.1	17.85	3.46	1.47
2012	1.3	18.79	3.02	1.5	1.3	17.19	2.95	1.57
2013	0.9	17.51	3.01	1.46	0.8	17.87	2.65	1.39
2014	1.1	18.8	3.42	1.31	1.1	18.3	2.70	1.50
2015	0.9	22.7	3.70	1.27	0.9	19.2	3.10	1.29
2016	—	21.1	3.26	1.45	—	20.18	2.85	1.39

Source: SEBI-Handbook of Statistics 2013, 2008; ISMR-2012, 2013, 2016.

Note: Volatility is calculated as standard deviation of the natural log of returns of indices for the respective period

Table 19.8 International comparison of global stock markets

Country/ region	*No. of listed companies*			*Market capitalisation ratio*			*Turnover ratio*		
Year	*2010*	*2011*	*2012*	*2010*	*2011*	*2012*	*2010*	*2011*	*2012*
Developed market	27,107	27,497	26,839	—	—	—	130.49	151.39	97.30
Australia	1913	1922	1959	157.28	87.34	84.60	84.01	104.03	81.75
France	901	893	862	72.71	56.57	69.78	76.15	93.98	61.79
Germany	571	670	665	42.72	33.17	43.72	98.27	148.44	82.45
Japan	3553	3961	3470	80.90	60.35	61.76	104.41	117.51	97.95
Korea	1781	1792	1767	130.83	89.08	104.50	149.34	204.45	128.24
Singapore	461	462	472	203.09	128.63	150.75	76.24	82.31	37.78
UK	2056	2001	2179	142.88	119.39	123.99	96.77	102.37	82.42
USA	4279	4171	4102	120.22	103.62	119.02	177.69	196.61	114.50
Emerging Market	21,673	21,924	20,681	—	—	—	92.32	116.91	81.92
China	2063	2342	2494	95.55	68.42	44.24	168.60	226.35	157.58
India	**4987**	**5112**	**5191**	**123.33**	**63.81**	**68.60**	**65.40**	**72.90**	**49.27**
Russia	345	327	276	81.62	46.37	43.41	79.61	143.95	83.72
Brazil	373	366	353	98.32	47.13	54.60	58.30	78.22	67.86
Indonesia	420	440	459	66.70	21.04	45.18	35.95	35.79	23.11
Malaysia	957	941	921	214.27	91.85	156.94	21.97	32.63	26.14
Mexico	130	128	131	51.93	29.48	44.57	23.89	27.40	22.50
World Total	48,780	49,421	47,520	—	—	—	—	—	—
USA as % of World	**8.77**	**8.44**	**8.63**	—	—	—	**43.0**	—	—
India as % World	**10.22**	**10.34**	**10.92**	—	—	—	**1.3**	—	—

Source: ISMR-2013, SEBI Handbook of Statistics-2013.

Notes: Market capitalisation ratio = Market capitalisation/GDP, Turnover Ratio = (Turnover/Market Capitalisation)

capitalisation ratio of all listed companies for most of the developed countries has come down from the year 2010 to 2011, but it has shown an increasing trend in the year 2012. In the case of emerging economies also market capitalisation ratio has declined during the same period. For India, it has drastically come down from 123 to 64 percent.

19.13 DO FUNDAMENTALS AFFECT STOCK RETURNS IN INDIA?

The movement of stock indices is highly sensitive to the changes in fundamentals of the economy and to the changes in expectations about future prospects. Expectations are influenced by the micro and macro fundamentals which may be formed either rationally or adaptively on economic fundamentals, as well as by many subjective factors which are unpredictable and also non-quantifiable. It is assumed that domestic economic fundamentals play determining role in the performance of stock market. Chen, Roll and Ross (1986) have argued that stock returns should be affected by any factor that influences future cash flows or the discount rate of those cash flows. In an empirical investigation they found that the yield spread between long- and short-term government bonds, expected inflation, unexpected inflation, nominal industrial production growth and the yield spread between corporate high- and low-grade bonds significantly explain stock market returns.

Friedman (1988) suggests wealth effect and substitution effect as the possible channels through which stock prices might directly affect money demands in the economy. Friedman (1988) expected that the wealth effect will dominate and thus the demand for money and stock prices to be positively related. The theoretical basis to examine the link between stock prices and the real variables are well established in economic literature, for example, in Baumol (1965) and Bosworth (1975). The relationship between stock prices and real consumption expenditures, for instance, is based on the life cycle theory, developed by Ando and Modigliani (1963), which states that individuals base their consumption decision on their expected life time wealth. Part of their wealth may be held in the form of stocks linking stock price changes to changes in consumption expenditure. Similarly, the relationship between stock prices and investment spending is based on the *q* theory of James Tobin (1969), where *q* is the ratio of total market value of firms to the replacement cost of their existing capital stock at current prices.

According to 'goods market approaches' (Dornbusch and Fischer, 1980) suggest that changes in exchange rates affect the competitiveness of a firm as fluctuations in exchange rate affects the value of the earnings and cost of its funds as many companies borrow in foreign currencies to fund their operations and, hence, its stock price. An alternative explanation for the relation between exchange rates and stock prices can be provided through portfolio balance approaches that stress the role of capital account transaction. Like all commodities, exchange rates are determined by market mechanism, that is, the demand and supply condition. A blooming stock market would attract capital flows from foreign investors, which may cause an increase in the demand for a country's currency. The reverse would happen in case of falling stock prices where the investors would try to sell their stocks to avoid further losses and would convert their money into foreign currency to move out of the country. There would be demand for foreign currency in exchange of local currency and it would lead to depreciation of local currency. As a result, rising (declining) stock prices would lead to an appreciation (depreciation) in exchange rates. Moreover, foreign investment in domestic equities could increase over time due to benefits of international diversification that foreign investors would gain. Furthermore, movements

in stock prices may influence exchange rates and money demand because investors' wealth and liquidity demand could depend on the performance of the stock market.

Bodie (1976), Fama (1981), Geske and Roll (1983), and Pearce and Roley (1983), Pearce (1985) document a negative impact of inflation and money growth on equity values. Many experts, however, believe that positive effects will outweigh the negative effects and stock prices will eventually rise due to growth of money supply (e.g. Mukherjee and Naka (1995)). They argue that a change in the money supply provides information on money demand, which is caused by future output expectations. If the money supply increases, it means that money demand is increasing, which, in effect, signals an increase in economic activity. Higher economic activity implies higher cash flows, which causes stock prices to rise. Bernanke and Kuttner (2005) argue that the price of a stock is a function of its monetary value and the perceived risk in holding the stock. A stock is attractive if the monetary value it bears is high. On the other hand, a stock is unattractive, if the perceived risk is high. The authors argue that the money supply affects the stock market through its effect on both the monetary value and the perceived risk. Money supply affects the monetary value of a stock through its effect on the interest rate. The authors believe that tightening the money supply raises the real interest rate. An increase in the interest rate would, in turn, raise the discount rate, which would decrease the value of the stock as argued by the real activity theorists.

The impact of real sector macro variables on equity returns has been much more difficult to establish. Mukherjee and Naka (1995) reveal that there has been a positive relationship was found between the Japanese industrial production and stock return. However, Cutler, Poterba and Summers (1989) found that Industrial Production growth is significantly positively correlated with real stock returns over the period 1926–1986, but not in the 1946–1985 sub-period. In Indian context, Bhattacharya and Mukherjee (2002) studied the nature of the causal relationship between stock prices and macro aggregates for the period 1992–1993 to 2000–2001. Their results show that there is no causal relationship between stock price and macro-economic variables such as money supply, national income and interest rate but there exists a two way causation between stock price and rate of inflation. Their results also indicate index of industrial production lead the stock price.

Here we have tried to find out the role of fundamentals for determination of stock returns in India during 2001–2002 to 2014–15. The monthly data of NSE Nifty, BSE Sensex, growth rate of industrial production, interest rate, inflation, foreign institutional investment inflows and exchange rate have been taken to carry out the empirical investigation. The sources of data are the Hand book of statistics on Indian economy published by RBI.

Table 19.9 shows that the regression coefficients of the variables such as inflation rate, FII investments, interest rate and exchange rate have their expected signs and statistically significant for both BSE sensex and NSE Nifty returns during the period 2001–2002 to 2014–2015. Growth rate of industrial production (the proxy for the growth rate) has not been emerged as a statistically significant variable in any of the cases. The variables like Inflation, interest rate and exchange rate have negative and growth rate and FII investment have the positive impact on stock returns in India. These results conclude that fundamental do affect the stock returns in India and the factors such as inflation rate, long-term interest rate, and foreign institutional investments are the major determinants of stock returns.

Table 19.9 Impact of fundamentals on stock prices in India during 2001–2002 to 2014–2015

Variables	*BSE SENSEX*			*NSE NIFTY*		
	Coefficient	*t-Statistic*	*p-Values*	*Coefficient*	*t-Statistic*	*p-Values*
Intercept	3.15	8.57	0.0001	4.59	9.29	0.00001
Inflation	–0.04	–1.35	0.0241	0.89	1.065	0.0356
IIP	0.09	0.45	0.88	0.25	1.89	0.91
FII	0.125	3.15	.0015	0.0568	0.15	0.023
IR	–0.0069	–0.136	0.045	–0.085	–0.259	0.055
EX	–0.235	–2.05	0.056	–0.013	–1.71	0.066
R Square	0.78			0.72		
F-Statistics	F(5150) = 9.56 (0.0001)			F(5150) = 8.92 (0.0001)		
D-W Statistics	1.21			1.95		

19.14 DRAWBACKS OF INDIAN STOCK MARKETS

LO 8
Show the drawbacks of the Indian stock markets

The discussion of the working of stock markets cannot be complete unless we point out their major weaknesses. This is really an important subject which deserves to be discussed at full length. However, for lack of space, we have to be satisfied with merely mentioning those weaknesses.[13]

- The working of stock markets in India is characterised by unethical practices of diverse forms on the part of existing companies, new companies and entrepreneurs, brokers and other operators on the markets. The mergers and acquisitions through malpractices, entering into unofficial transactions even before issues open up for subscription, rigging up of premia on new issues, presenting an excessively rosy picture about new ventures, insider trading, misinformation, stealing of shares, trading in fake shares and circular trading are some of the examples of the utterly reprehensible practices on the stock markets. As a result, an almost complete lack of protection to the interests of the genuine and small investors is the worst part of the functioning of these markets. The majority of investors in corporate securities have serious grievances and the SEBI has not been able to help much in this regard. Volatility on Indian stock exchanges is twice as much as on the New York Stock Exchange. The standards of service and information provided to investors by companies and stock brokers are very poor indeed.
- The trading on Indian stock markets is extremely thin and restricted. The number of listed stocks in which there is active and daily trading is extremely small; the number of hours during which trading normally takes place is very limited and restricted. This already small number of hours is quite often further curtailed and the market often remains closed on many days in a week. As a result, the liquidity of scrips in reality is quite low. About 64 percent of listed scrips were not traded at all on BSE during 1995–1997.

[13]For a detailed discussion of these weaknesses, see Bhole, L M, 'The Indian Capital Market at Crossroads', *Vikalpa*, April-June, 1995, and Bhole, L M, 'The State of Indian Stock Market Under Liberalisation, *Finance India*, March 2002.

- The whole activity on the stock market and share prices are determined by excessive speculation; they have little correspondence with the fundamentals or the real performance of the economy. The industrial production, profits, dividends, and so on, appear to have little relation with changes in share prices in both the directions. The speculators in India (stock exchange members, property dealers, bullion and commodity merchants, business tycoons, company insiders, fund managers, and so on) have reduced speculation to a degenerate activity.
- In theory, there is a positive relationship between share price movements and the volume of new issues. However, our study has shown that in practice, there is no positive relation between these variables in India.
- The market has often experienced sharp payment crises arising out of brokers entertaining speculative business well beyond their manageable resources. The authorities virtually failed to monitor and curb these excesses. The payments crises have been so acute that a number of stock exchange members have been declared defaulters and a few others have been directed not to carry on their business. The settlements in specified and non-specified shares have been delayed quite often, and this has caused hardships to many investors. Instead of providing liquidity to share investments, the stock market has become the cause of restricting the marketability of shares on account of delays in settlements. The stock exchanges do not have uniform settlement periods and dates. The bad deliveries have been crippling the market.
- The financial institutions are reported to be aiding, abetting, colluding and participating in all the drawbacks mentioned above.
- There is structural and organisational imbalance in the growth of the stock markets. As said earlier, only four exchanges account for the major part of the total business. The stock markets even today are almost entirely urban-oriented with little relation with vast rural economy.
- The official markets are working side by side with the unofficial or parallel stock markets. The kerb trading is high in volume.
- Small and individual investors, small market players and small companies have always suffered from many disabilities on the capital market, but things have worsened for them with the passage of time. The stock market activity is becoming more centralised, concentrated and non-competitive, serving the bigger and established interests. The market suffers from a 'big is beautiful' syndrome. The ownership of equities by individuals and households as a percentage of total equity capital is declining, and public issues are increasingly becoming less for the public. The market is increasingly being dominated by institutional investors. They, along with FIIs, are currently picking up *en bloc* about 75 percent of new issues which account for about 60 percent of the market turnover.
- The volatility of the Indian stock market has tended to increase over the years due to the (a) adoption of liberalisation policy, (b) introduction of flexible exchange rate regime, (c) acceptance of globalisation, internationalisation and integration of the Indian market with the world markets, (d) introduction of new, innovative, hybrid financial instruments, and (e) technological changes.
- Contrary to share prices, the secular trend in the average gross dividend yield on equities has been one of sharp decline. The high total rate of return on equities indicates that the equities have emerged as the gainful medium of investment primarily for the speculative investors. Thus, as somebody has put it, the Indian equities market requires investors to become 'compulsive speculators' to earn a reasonable rate of return on their investments.

- Although the amount of capital raised on NIM has increased in the recent past, it has been found that in many cases, funds have been raised for frivolous purposes, or that the proceeds of issues have been diverted to stock exchanges and property markets.
- As said above, the stock market has become a veritable cesspool of innumerable and wide varieties of unscrupulous, illegal practices, murky deals, and frauds. To enable the common citizen to gauge the depth of the malaise, a few examples may be given here:
  - Taking advantage of the craze among the *nouveau riche* or *parvenus*, and the middle class aspirants for holding equities, promoters of all sorts have been 'expropriating' huge sums of money through such strategies as inflating project costs, fixing astronomical premia and raising money for companies which exist only on paper. This is done in collusion with merchant bankers, underwriters, advertisers, financial weeklies, and other sundry 'enterprising' or 'risk-taking' marketeers. Similarly, the companies routinely keep float money (i.e. oversubscription amount) in their accounts for 3–4 months, pocketing huge interest which really belongs to the investors.
  - Although legal and allowed (approved) by the authorities, India is perhaps the only country in the world where there is a practice of prior, privileged, preferential, reserved allotments of a substantial part (25–30 percent) of new issues, often at a heavy (as high as 90 percent) discount, to promoters and their nominees, companies, NRIs, foreign collaborators, FIIs, foreign banks, mutual funds, and so on. This has enabled almost all foreign companies to hike their equity stake in their Indian branches at ridiculously low prices. The executives of companies, mutual funds, and other private and public financial institutions often have insider information and they misuse it for making large gains for their organisations or for themselves.
  - A massive racket was once operated by traders in fake or benami share certificates wherein blank certificates of several reputed and blue chip companies with forged company seal and the signature of the authorised signatory were available at various places in Mumbai at 10–20 percent of their market value. These shares were being used mainly as instruments for pledging purposes to borrow money from banks and private financiers.
  - In another racket which came to light recently, a large number of brokers and sub-brokers were caught tampering with public issue application forms and pocketing brokerages on applications actually submitted by other brokers.
  - In yet another racket discovered in November 1993, it was found that shares worth crore of rupees which were supposed to be in the safe custody of Stock Holding Corporation of India Ltd. (SHCIL) were used for raising funds illicitly. As a practice, the shares of reputed blue chip companies bought by financial institutions are kept with SHCIL for 200–300 days. They were used for 100–250 days to pledge or exchange and to make considerable amount of money which, in turn, was used to play in share markets or to lend as *badla* finance or to keep as deposits. In some cases, the shares kept in their safe custody were sold by some people.
- Contrary to the general belief that stock exchanges are archetypal examples of the perfectly competitive market, the Indian stock exchanges are oligopolistic in nature because their membership is restricted. Their functioning is marked by the operation of multiple cards by many members. The brokers and jobbers habitually stop entertaining fresh business from their clients and force them to square up positions after pushing down prices on the day before the end of the settlement because they speculate in shares without possessing them. They force weak clients to pay *badla* which is a violation of trading

norm. They often trade on their own accounts, credit gains to their own books and debit losses to their clients' accounts. They also maintain parallel account books. They delay payments of sales proceeds or deliveries of shares to their clients, particularly the small ones. They deal in 'Dharavi Counter', that is, in shares which are newly listed but are not yet recorded in the official list of the exchange, and they do so without informing the exchange. Such practices result in huge losses for their clients and huge profits for themselves.

SUMMARY

- There are two types of market segments in the stock market (i) primary or new issue market, and (ii) secondary market. The major instruments available in these two segments are ordinary shares, preference shares, right issues, bonus issues, initial public offerings, follow on public offerings, and so on.
- In the primary market the price of initial public offerings is determined through the book-building process or fixed price method.
- The secondary market operates through the over-the-counter market and exchange-traded market. The over-the-counter market operates primarily over the telephone and computer network and the organised exchanges are categorised by a physical building where the trading takes place in each day for a specific time period in each day. The major stock exchanges in India are Bombay Stock Exchange (BSE) and National Stock Exchange (NSE).
- The demand and supply of shares and the interaction among the traders in the market set the prices in the secondary market on a day-to-day basis.
- The securities are grouped into various categories on the basis of their size, liquidity and impact cost.
- There are two types of market systems such as order-driven and quote-driven markets that exist in the trading of equities in the stock exchanges.
- In response to the different policy measures taken, although, both primary and secondary segments of market have grown in terms of size and volume, still they are not at par with the developed stock markets as Indian stock market has accounted for only 1.3 percent of total world turnover in the year 2012–2013. The macroeconomic factors which determine the stock market return in India are inflation, foreign institutional investment, call money rate and exchange rate.

KEY TERMS

Equity culture
Primary market
Secondary market
Ordinary share
Preference share
Private equity
Initial public offerings
Follow on public offerings
Right issue
Bonus issue
Private placement
Book building
Reverse book building
Stock market indices
Price earnings ratio
Dividend yield
Price to book ratio
Exchange-traded fund
Bid ask spread
Order-driven market
Quote-driven market

Initial margin
Maintenance margin
Margin call
Short selling
Settlement cycle
Turnover ratio
Value-traded ratio
Index-based market-wide circuit breaker
Tracking error

QUESTIONS

1. Critically examine the relationship between stock market development and economic growth.
2. What do you mean by primary stock market and explain the entry norms for routes available to an issuer for accessing the capital market in India?
3. What are the different steps followed in the book-building process?
4. What are the different methods of issuing fresh capital in Indian stock market?
5. Does investor sentiment affect the stock prices? If yes, then provide the theoretical basis for this.
6. What do you mean by stock market liquidity and how it is measured?
7. Provide a synoptic view of the market microstructure in the Indian stock market.
8. What are the various measures taken by the different authorities in India to develop the equity culture?
9. 'Despite various measures taken to develop the equity market, the growth of equity market ought to remain limited in India'. Justify.
10. Point out major weaknesses of the Indian stock market
11. Do fundamentals determine stock returns? Explain.
12. Explain with a suitable example how and when an investor gains through short selling?
13. Following are the daily individual stock quotations of five NSE-listed companies. Find the weightage for the index construction by including the five stocks in terms of equal-weighted, price-weighted, and market value-weighted series.

Stock	*Open price*	*High*	*Low*	*Close*	*Base price*	*52 Week (Low/High)*	*P/E*	*Traded quantity*	*Traded value*	*Outstanding shares*
A	78	79.25	75.05	75.45	44.95	35.20/85.10	15.1	86945	6560000	14331028
B	18.2	18.85	17.95	18.30	9.36	11.60/52.95	8.6	4056072	74226118	191986549
C	3730	3790	3730	3764	2936	3134/4900	62.89	576	2167863	11265070
D	130	132.7	126.4	128.6	106	118/169	11.63	267078	34346231	74177694
E	1400	1421.8	1336	1347	1298	1279/1489	49.83	66747	89908209	14843230

14. Assume that an initial margin requirement of 50 percent and a maintenance margin of 30 percent. An investor buys 100 shares of stock on margin at ₹60 per share. The price of the stock subsequently drops

to ₹50. Is there a margin call? On the basis of your result justify your answer. If your answer is no, then at what maximum price the investor will get the margin call?

15. Write short notes on the following:
    (a) Private equity
    (b) Over-the-counter exchange of India
    (c) Information and investor decisions
    (d) Exchange-traded funds
    (e) Order-driven market
    (f) Quote-driven market
    (g) Short selling

Derivatives Market

20 CHAPTER

Learning Objectives

- **LO 1** Know various types of financial derivatives and the important concepts used in derivatives market
- **LO 2** Identify different models used for the valuation of derivatives
- **LO 3** Understand the prospects and policy of derivatives market in India
- **LO 4** Illustrate the market design for financial derivatives trading in India
- **LO 5** Explain the financial derivatives market
- **LO 6** Discuss the development of commodity derivatives market in India

20.1 INTRODUCTION

In industrialised countries, apart from money market and capital market securities, a variety of other securities known as derivatives have now become available for investment and trading. There is a demand in India also to introduce these securities and to take policy measures to develop markets for them. This chapter discusses various aspects of these financial derivatives. *Derivatives* or derivative securities are contracts which are written between two parties (counterparties) and whose value is derived from the value of underlying widely-held and easily marketable assets such as agricultural and other physical (tangible) commodities or currencies or short-term and long-term financial instruments or intangible things like commodities price index (inflation rate), equity price index or bond price index. A derivative contract simply represents a promise or an agreement to transfer the ownership of the underlying asset at a specific place, price and time specified in the contract. The counterparty that contracts to buy is said to have created a *long position* and the counter party that contracts to sell is said to have established a *short position*. The derivative contract whose price has been derived from the commodities is called *commodity derivative*. For example, crude oil, wheat, and so on. A derivative contract specifying a financial instrument such as interest rate, foreign exchange, stock index, and so on, as the underlying is defined as *financial derivative*. Derivatives are traded either in *organized exchanges* or in an *over the counter market*. The exchange-traded derivative contracts tend to be standardized and designed to be anonymous trading between parties who do not necessarily know each other. The exchange-traded derivatives are quite liquid and have low transactions cost. In the over the counter

market, two counter parties negotiate the terms of the contracts among themselves. This means that two parties assess each other's credit worthiness and make appropriate arrangements to mitigate the credit risk.

The values of derivatives and those of their underlying assets are closely related. Usually, in trading derivatives, the taking or making of delivery of underlying assets is not involved; the transactions are mostly settled by taking offsetting positions in the derivatives themselves. There is, therefore, no effective limit on the quantity of claims which can be traded in respect of underlying assets. Derivatives are 'off balance sheet' instruments, a fact that is said to obscure the leverage and financial might they give to the party. They are mostly secondary market instruments and have little usefulness in mobilising fresh capital by the companies (warrants, convertibles being the exceptions). Although the standardized, general, exchange-traded derivatives are being increasingly evolved, still there are many privately negotiated, customized, OTC-traded financial contracts which are in vogue and which expose the users to operational risk, counterparty risk, liquidity risk and legal risk. There is also an uncertainty about the regulatory status of such derivatives. There are bewilderingly complex varieties of derivatives already in existence, and the markets are innovating newer and newer ones continuously: plain, simple or straightforward, composite, joint or hybrid, synthetic, leveraged, mildly leveraged, customized or OTC-traded, standardized or organized exchange-traded. Although we are not going to discuss all of them, the names of certain derivatives maybe noted here: futures, options, range forward, and ratio range forward options, swaps, warrants, convertible bonds, credit derivatives, captions, swaptions, futures options, the ratio swaps, periodic floors, spread lock one and two, treasury-linked swaps, wedding bands three and six, inverse floaters, index mortising swaps, and so on. Because of their complexity, derivatives have become a continuing pain for the accounting person and a true mind-bender for anyone trying to value them.

20.2 SERVICES PROVIDED BY DERIVATIVES

The services provided by derivatives are as follows:

- To control, shift, avoid, reduce, eliminate, and manage efficiently various types of risks through hedging, arbitraging, and acquiring insurance against them. In times of erratic trading, volatile interest rates and exchange rates, monetary chaos, national income turbulence, and volatile markets, derivatives are said to enable investors to modify suitably the risk characteristics of their portfolios or to shift the risk on to those (speculators) who are willing to assume it for higher profits. They increase the capability of the markets to absorb risk, and this has a beneficial effect on the level of commercial and industrial activity. In their absence, the cost of risk to economy would be higher, and, it would, therefore, be worse off.
- To help in disseminating information which enables the society to discover or form suitable/correct/true/equilibrium prices. They serve as barometers of future trends in prices which result in the formation of correct prices on the spot markets now and in future. They provide for centralized trading where information about fundamental supply and demand conditions are efficiently assimilated and acted on. The economic and social benefits of accurate and equilibrium prices thus arrived at are many, the superior allocation of resources being one of them.
- To enhance liquidity and reduce transaction costs in the markets for underlying assets.
- To enable individuals and managers of large pools of funds to devise or design strategies for proper asset allocation, yield enhancement and achieving other portfolio goals. They provide opportunities for using certain kinds of special knowledge to obtain portfolio which offer higher expected returns than other portfolios comprising common stock, bonds and so on with the same degree of risk.

- To smoothen out price fluctuations, to narrow down the price spread, to integrate price structure at different points of time and to avoid gluts and shortages in the markets. The existence of speculation, competitive trading and differing risk-taking preferences of the market operators help in achieving these results.
- To act as 'starter form of investment', which results in a wider participation in the securities markets. They attract young investors, who would not otherwise invest in stocks, to the securities industry. They act as catalysts to the growth of stock markets.
- To offer important advantages of diversification and enable the society to reach the position of Pareto optimality by developing 'complete markets'. Given the total return in its each state, the financial market is said to be Pareto optimal or efficient if no other set of securities can make some investors better off without making at least one other investor worse off. The securities market is said to be complete if the patterns of returns of all additional securities are spanned by the already existing securities in it, or if it provides so many securities that no additional security can be created whose returns cannot be duplicated by a portfolio of existing securities.

20.3 TYPES OF DERIVATIVES

There are various types of derivatives products in Market. They are classified as forwards, futures, options, Swaps, warrant are convertibles, credit derivatives weather derivatives and freight derivatives.

LO 1

Know various types of financial derivatives and the important concepts used in derivatives market

20.3.1 Forwards

Various types of contracts are in vogue in markets for commodities and financial instruments. In India, the FCRA or Forward Contracts (Regulation) Act, 1952 classifies different types of contracts as follows:(i) Ready Delivery Contract (RDC) which provides for delivery of goods/instruments and payment of a price therefore either immediately or within 11 days after the time of contract. It leads to spot or cash transactions which take place at current commodity price or interest rate or exchange rate and so on. (ii) Forward Contract (FC): It is a contract for delivering goods and is not a RDC. It is also known as a Specific Delivery Contract (SDC). Forward transactions are spot transactions which are deferred for execution to a future but fixed date. The SDC is of two types: (a) Non-Transferable Specific Delivery Contract (NTSDC) in which rights and liabilities mentioned in contracts are not transferable, and (b) Transferable Specific Delivery Contracts (TSDC) in which they are transferable.

20.3.2 Futures

Futures or futures contracts are transferable specific delivery forward contracts. They are agreements between two counterparties that fix the terms of an exchange, or that lock in the price today of an exchange, which will take place between them at some fixed future date. They are highly standardized contracts between the sellers or 'writers' or 'shorts' and the buyers or 'longs' which obligate the former to deliver, and the latter to receive, the given assets in specified quantities, of specified grades, at fixed times in future at contracted prices. The period of contract (deferment) may be several months; it normally varies between 3 and 21 months abroad. Depending on the underlying assets, one can talk of (a) commodity futures, and (b) financial

futures; stock index futures, interest rates futures, and currency futures are the examples of the latter. While the stock index futures are traded on the basis of different share price indices rather than on any individual share, interest rates futures are written on the basis of interest rates or price indices of fixed-interest securities such as treasury bills and bonds, industrial bonds (debentures), commercial paper, certificates of deposits, and mortgage loans.

As indicated above, futures contracts are transferable legal agreements; and their terms cannot be changed during the life of the contract. Strictly speaking, futures are not securities. In the United States, therefore, they are not regulated by the Securities and Exchange Commission. The Commodities Futures Trading Commission is responsible for regulating trading in all the domestic futures markets there. Although futures contracts provide for the delivery of contracted assets, in practice, only a small proportion of contracts which are not offset by the corresponding opposite contracts are settled by the actual delivery. The very motivation of these contracts is not actual delivery, except in a residual sense, as they are entered into mostly either for hedging or for speculation. They are mostly paper contracts entered with a view to realize money difference. Hence, futures markets are sometimes called 'paper markets'. In fact, they are not even paper markets because trading in them does not involve certificates; the only paper that is exchanged on them is contract notes. There is simply no deliverable asset in the case of bond or equity index futures; the value of the contract in such cases is some multiple of the value of the index, and the settlement of such contracts has to be in cash because it would be impossible or impractical to deliver all the stocks or bonds in a particular index. Is futures trading equivalent to gambling? Not really, because it is closely related to the commodity in which it is conducted. However, as we move from the commodity to index futures, it tends to become quasi-gambling.

Forwards versus Futures

Forward Contracts (FCs) or forwards have flourished for centuries in many countries including India. They can be said to be the forerunners of the futures. The contractual provisions and the obligations of trading parties to forwards and futures greatly resemble. They are virtually identical in concept and intended use. But there are important differences also between them which ought to be noted: (a) in respect of terms of contract, while the futures are standardized instruments, the forwards are customized ones, that is, they are tailored to the specific needs of individual counterparties; they are special-purpose instruments with a dealer market where transactions are negotiated. Buyers of forwards need to find a trader or seller willing to sell a contract suitable to the buyer's needs. Being standardized, all such things are not necessary in the case of futures. (b) Forward contracts tend to be much larger in size than the futures contracts. (c) While the futures are traded only on the organized and recognized exchanges, the forwards can be traded on the OTC markets and off-exchanges. This changes the nature and extent of risk borne by the contracting parties in the two cases. There are no secondary markets for forwards, whereas organized futures exchanges provide secondary market services. In the absence of secondary markets, parties to forwards are locked into the contract and are subject to the risk of failure to perform by either party as well as the uncertainty of subsequent price fluctuations and rates changes. The credit risk is borne by each party to a forward contract, while it is reduced substantially in futures due to the existence of a clearing house of a recognized exchange. (d) While the forwards are mostly for the actual delivery, futures are not normally so. It appears that more than 90 percent of forwards are settled by the actual delivery, whereas less than 5 percent of futures are so settled. Forwards may be offered for delivery on any date, whereas futures are available for delivery only on a few specified dates fixed by the exchanges.

(e) Forward contracts settlement occurs on the maturity date or the date agreed upon by the counterparties, whereas in the case of futures, it occurs daily via the Exchange Clearing House on daily marked-to-market basis. The profits and losses on futures are settled daily. (f) Transaction costs of forwards are based on bid-ask spread, whereas futures entail brokerage fees for buy-and-sale orders. (g) Margins or collaterals are not required in forward contracts, but they are required from both counterparties in futures contracts.

20.3.3 Options

Options are contracts between option writers (sellers) and buyers, which obligate the former to deliver, and entitle the latter without obligation to buy stated quantities of assets with stated quality at some future dates at today's contracted prices (exercise or strike prices). When the buyers have the right to receive the delivery of assets, they are known as '*call options*', and when they have the right to receive the payment by handing over the assets, they are known as '*put options*' (roughly speaking, call = buy and put = sell). The buyers have to pay one-time non-refundable premium to the sellers for the right enjoyed by them. In option transaction, while the potential loss of the seller is unlimited, it is limited to the extent of premium for the buyers. The date on which the buyers actually exercise the option is the *exercise date*, while the last day by which the option has to be exercised is the *expiry date*. The options in whose case these two dates can be different are known as *American options*, whereas those in whose case the two dates are the same are called *European options*. The options are created and traded by the investors; the corporations which issue assets underlying them have no interest/responsibility in respect of their creation, execution and termination. In options markets, the *exercise (strike or striking) price* means the price at which the option-holder can buy and/or sell the underlying asset. If the current price of the underlying asset exceeds the exercise price of a call option, the call is said to be *in the money*. Similarly, if the current price of the underlying asset is less than the exercise price of a call option, it is said to be *out of the money*. The near the money call options are those whose exercise price is slightly greater than current market price of the asset. Premium is the price paid by the buyer to the seller of the option, whether put or call. A call option when it is written against the asset owned by the option writer is called a *covered option*, and the one written without owning the asset is called *naked option*.

Types of Options A complex variety of options exists on the world options markets. There are simple options such as commodity options, stock options, bond options, currency options, stock index options and options on futures; compound options such as swaptions, flortions and captions; and synthetic options which combine options and futures. Among these, stock options may be on individual stocks or on various stock price indices, but the former appear to be more in vogue. Many types of options have been of recent origin, for example, *stock index options* and *interest options* on treasury notes and bonds. Stock index options enable investors to trade on general stock market movements. They differ from stock options in that while the latter require the actual delivery of stocks upon exercise, the former are settled by payment of cash; the amount of cash settlement is equal to the difference between the closing price of the index and the strike price of the option. The investment strategies with index options are similar to those for individual stock options. Investors expecting a market rise buy calls, and those expecting a market decline buy puts. Index options offer benefits of lower cost (premium cost and transactions costs) and greater efficiency than a package of options on a multitude of individual stocks and debt securities because of diversifying effects of operating with a sort of portfolio which an index represents.

Another recent addition to options markets has been the foreign currency exchange or foreign exchange or *currency options* which act as vehicles to protect against adverse exchange rate fluctuations. They are contracts that confer the right to buy or sell foreign currency at a specified price at some future date. Perhaps the latest innovation in this context is the futures options—a combination of futures and options. Options on foreign exchange futures, options on interest rates futures, and options on stock index futures are now traded on derivatives markets in the United States and other countries. Options on future contracts give their holders the right to assume a long or short position in the respective future contracts, that is, they give the holders the right to buy or sell respective future contracts. An attraction of options on futures is the limited liability assumed by their purchasers who, once the contract is bought, have no additional obligations. Unlike futures, they do not have to be settled, nor are there any margin calls in their case.

Another innovation in options worth mentioning is the introduction of *range forward* (*RF*) and *ratio range forward* (*RRF*) contracts. The former are a combination of the call and put options; they involve simultaneous purchase and sale of call and put options on the same principal amount and for the same maturity but at different strike prices. By using them, the hedgers pay a premium on the purchase of options and receive a premium on sales. The net cost of the options use is the difference between these two premia, which can be reduced by adjusting the strike prices of two options. The basic objective of RFs is to bring the hedging cost to zero. In using RFs, one need not forecast the future prices precisely, it is enough to forecast a range of prices. The RRFs are a modification of RFs; in their case, the customers or hedgers sell a put option not for the entire amount but for a part of it. By using them, the hedgers do not lose the entire upside potential; they lose only a part of it. They share the upside gain potential with the bank; the ratio of sharing depends on the agreement between them. There are also options on swaps known as *swaptions*. The holders of swaptions have a right, but not the obligation, to enter into swap contracts on or before the exercise date. If the holders have a right to receive fixed interest payments, it is a put swaption, and if they have to pay fixed interest, it is a call swaption. It is necessary that premium be paid for obtaining the swaption.

Benefits for Option-holders Option-holders do not receive any dividend or interest payment; they have no say in the policies of the companies. Options yield only capital gains which may enable their holders to enjoy a tax advantage. Options are traded on OTC as well as recognised and well-organised options exchanges which have features that are very similar to those of futures exchanges. Options are said to offer a number of advantages to the investors. First, in the case of calls, they can control a claim on the underlying asset for a much smaller investment than what is required to buy the asset itself. In the case of puts, they can duplicate a short sale without a margin account and at a modest cost in relation to the price of the asset. Second, in the case of options, investors' maximum loss is known in advance which is equal to the premium or cost or price of the option. Options create the possibility of gaining a windfall profit from favourable price (interest rates, exchange rates) movements. Third, options expand the investment opportunity set available to investors; they enable investors to enjoy a much wider risk-return combinations which would not be otherwise possible. Fourth, they can reduce total portfolio transactions costs. Finally, index options enable investors to participate in the overall movement of the market, or to protect their portfolio against market movements with a single trading decision. In other words, options enable investors to obtain a pattern of returns that would be unattainable while using conventional sort of investments.

Futures versus Options

Although exchange-traded (ET) futures and options may act as substitutes for each other, they have some crucial differences. In futures, the risk exposure and profit potential are unlimited for both the parties, whereas in options, risk exposure is unlimited and profit potential limited for the sellers, and it is the other way round for the buyers. The maturity of contracts is longer in futures than in options. In futures, there is no premium paid or received by any party, whereas in options the buyers have to pay a premium to the sellers. While futures impose obligations on both the parties, options do so only on the sellers. Both the parties have to put in margins in futures trading, but only the sellers have to do so in options trading.

20.3.4 Swap

Swaps are agreements between two parties to exchange assets or sets of financial obligations or a series of cash flows for a specified period of time at predetermined intervals. They include both spot and forward transactions in one agreement, and are generally customised transactions. A party can reverse or unwind a swap position before the end of the term by cancelling the agreement and delivering a final difference payment to the counterparty. Alternatively, it can write a 'mirror' contract to exactly offset the original swap in the secondary swap market. The forerunner of swaps was 'parallel loans' which helped companies to reduce their exposure to fluctuating foreign exchange rates. In a parallel loan, say, an Indian company would give a loan denominated in rupees to a UK company, and simultaneously, a UK company would give a loan of equivalent amount denominated in pound sterling to the Indian company, thereby avoiding the problem of unfavourable fluctuations in foreign currencies. Parallel loans have now been largely substituted by currency swaps. The corporates, banks, individual investors, and so on, are now using swaps to organise complex and innovative financing that reduces borrowing costs and increase control over interest rate risk and foreign currency exposure. As a result of deregulation, growing international financial integration and increasing volatility of interest and exchange rates, the swaps have become one of the fastest growing financial derivatives now. Few euro bonds are, for example, issued now without at least one swap behind them to give the borrowers cheaper and more desirable funds. The swaps have resulted in greater refinement in risk management techniques, which, in turn, has facilitated greater corporate participation in international financial markets. It must, however, be remembered that swaps themselves, like other derivatives, are subject to several risks.

When the barriers prevent arbitrage from functioning fully, swaps are said to provide real economic benefits to both the parties. These barriers may be in the form of legal restrictions on spot and forward foreign exchange transactions, different investor perceptions about the appeal, acceptability, risk, and creditworthiness of different parties, tax differentials and so on. Currency swaps can be used to provide long-term financing in foreign currencies. In countries where long-term capital and forward foreign exchange markets are underdeveloped, swaps provide liquidity to such markets. Swaps are said to be induced by spread variations, market segmentation, market saturation and differences in financial norms. When there is an interest spread difference applicable to two parties in two markets and the markets are segmented, opportunities for swapping are created. Similarly, when an issuer finds that a particular capital market is saturated with his debt, and, therefore, it is unwilling to absorb any more of his debt, a proxy borrower may be used along with a swap transaction. Finally, differing debt–equity norms in different capital markets may create the scope for swap

transactions. In earlier days, some intermediaries used to bring counterparties to a swap together. Since they did not assume any risk in transactions, investment banks used to perform match-making function. As swap contracts became more standardised, and as it became necessary for the intermediaries to assume a part of the risk (similar to what organised exchanges do in options and futures markets), commercial banks became significant intermediaries in swap markets.

Types of Swaps The markets have developed a variety of swaps. (i) Interest Rate Swap (IRS): An interest rate swap is a transaction between two parties involving an exchange of one stream of interest obligations (payments) for another for specific maturity on a notional principal amount, which is simply a reference amount against which the interest is calculated; no principal amount ever really changes hands in such a transaction. Maturities range from under a year to over 15 years, but most transactions fall within a 2-year to 10-year period. There are many sub-types of interest rates swap. For example, a *coupon swap* in which one party pays a fixed rate calculated at the time of trade as a spread to a particular treasury bond, whereas the other side pays a floating rate that resets periodically throughout the life of a deal against a designated index. Thus, coupon swap exchanges a fixed-rate stream of interest payments for a variable rate stream. One party agrees to pay a fixed rate of interest on the notional principal at specified intervals, and the counterparty agrees to pay a rate that floats with some published rate (i.e. basis), perhaps the treasury bill rate or London Interbank Offer Rate (LIBOR) or some other rate. In a basis-rate swap or *basis swap*, two parties exchange floating interest payments based on different reference rates. Using such a relatively straightforward mechanism, interest rate swaps transform debt issues, assets, liabilities or any cash flow from one type to another and from one currency to another.

A *bond swap* is the simultaneous purchase and sale of two or more bonds with similar characteristics in order to earn a yield differential. Differences among bonds in coupons, default risk, marketability, maturity, tax treatment, call provisions, sinking fund arrangement and so on to determine the potential profitability of the bond swaps. Portfolio managers utilise these swaps primarily to generate incremental capital gains and/or increased income from switching of bonds. Investors who engage in bond swaps search for large yield differentials and short workout periods, that is, the time in which a realignment of bond values takes place. Generally, the larger the yield differentials and shorter the workout period, the greater the return from the bond swap. A *substitution swap* is an exchange of one bond for a perfect-substitute bond to earn several additional basis points due to a transitory mispricing. The *inter-market spread swap* refers to the switching of bonds from different market sectors under the belief that yield differentials (yield spreads) between two market sectors are out of their proper alignment. Unlike in the case of substitution swap, the two bonds in the intermarket spread swap are entirely different bonds, for example, an industrial bond is swapped for a utility bond. In a *tax swap*, non-taxable municipal bonds may be substituted for taxable corporate bonds of the same risk to increase the after-tax return. Similarly, high-coupon bonds selling near par value might be swapped for low coupon bonds selling at a large discount in order to increase the after-tax return arising from the differential tax rates on capital gains and interest income. *Swaps with timing mismatches* involve counterparty payments according to different schedules. A zero swap requires one party to pay at specified intervals throughout the term of the swap, while the other party pays only at the end of the term. *Swaps with option such as payoffs* are similar to coupon swaps within specified ranges of market interest rate changes, beyond which the terms of the swap change.

Features of Interest Rate Swap The principal features of interest rate swaps are as follows: (a) They effectively translate a floating rate borrowing into a fixed rate borrowing and *vice versa*. The net interest

differential is paid or received as the case may be. (b) They are structured as separate contracts distinct from the underlying loan agreements. (c) They are applicable to new as well as existing borrowings. (d) They are treated as off-balance-sheet transactions.

Currency Swap A currency swap is a contract exchanging foreign currency in the spot market with a simultaneous agreement to reverse the transaction in the forward market. Both exchange rate and timing of the forward market transaction are specified at the time of the swap. Put differently, in a currency swap, both the principal and interest in one currency are swapped for principal and interest in another currency. On maturity, the principal amounts are swapped back. For example, a company that has borrowed rupees at a fixed interest rate can 'swap away' the exchange rate risk by setting up a contract whereby it receives rupees at a fixed rate in return for dollars at either a fixed or floating interest rate. Currency swap can help to manage both interest rate and exchange rate risk. A major difference between the currency swap and interest rate swap is that in the case of the former, there is always an exchange of principal amounts at maturity at a predetermined exchange rate, whereas in the case of the latter, there is no such exchange of principals. The currency swap contract behaves like a long-dated forward foreign exchange contract, where the forward rate is the current spot exchange rate.

Debt–Equity Swap In the recent past, the market for debt–equity swaps in LDC debt has expanded significantly. In a debt–equity swap, investors (corporates) purchase the external (dollar) debt of less developed countries on the secondary loan market at a discount to swap it into (to acquire) equity or domestic currency in those same countries. For several years, European and US commercial banks have been selling troubled LDC loans in the secondary market at heavy discounts. In a typical deal, a multinational corporation that wants to invest in, say, Chile hires an intermediary to buy Chilean loans in the secondary market. The corporation then (again through a middleman) presents the loans, denominated in dollars, to the Chilean Central Bank which redeems them in pesos. The central banks pay less than the face value, but more than the value at which loans trade for in the secondary market.

20.3.5 Warrants and Convertibles

Warrant is a contract/option entered into by the issuing company giving the holder the right to purchase or subscribe to the stated number of equity shares of that company within a predetermined specified period of time at a predetermined price. Warrants are somewhat similar to call options but they also have the following differences: While the warrants are issued by companies, options are created by investors, and, as was said earlier, the companies do not have to do anything with such a creation. Warrants usually have long maturities (of several years), whereas options expire in short periods of time such as 9 months. Unlike options, warrants are not standardised, they are unique. Warrants help companies in raising fresh capital whereas options do not have such uses. Warrants are typically issued as sweeteners attached to bonds/debentures and equity issues so that they are successful in terms of volume and price. Warrants can be detached and traded separately. It maybe possible to issue callable warrants, and although all the conditions of warrants are specified at issuance, it may be possible to alter the expiration date if certain conditions transpire. The typical maturity of warrants is 3–10 years, but perpetual warrants also have existed abroad. Warrants can be traded on the exchanges or over the counter as in the case of equities. Many investors never exercise warrants; they simply buy and sell them for capital gains. Thus, investors are often interested in warrants because of their speculative and leverage opportunities.

Convertible bonds/debentures and convertible preference shares are the other types of equity derivative securities. They can be fully or partially converted into equity of the issuing company on specified terms with regard to the timing, the price and the ratio of conversion. They carry a claim on the common stock of the same company (issuer). The claim can be exercised at the owner's initiative. Many convertible bonds cannot be exercised for certain initial period, say 6–24 months. If conversion is not effected, convertibles remain in existence till maturity (in the case of bonds) or for perpetuity (in the case of preference shares). Unlike options and warrants, convertibles are valuable in their own rights; only a part of their value is derived from the option feature. Similarly, while the option feature is not inseparable from convertibles, warrants can be detachable. Unlike convertibles, warrants can be issued independently; they need not be tied with some other instrument. While warrants can be exercised for cash, convertibles do not have such a feature. Convertibles are hybrid securities with features of bonds/preference shares and common stock. The important terms in understanding them are conversion ratio, conversion price, conversion value, and conversion premium. We have discussed them in Chapter 2. In India, the SEBI has issued the following guidelines with regard to the provisions applicable to the fully and partially convertible debentures: (a) The conversion premium and the conversion timing is to be predetermined and stated in the prospectus. (b) Any conversion has to be optional, that is, at the volition of the debenture holder if it takes place at or after 18 months but before 36 months from the date of allotment. (c) A conversion period of more than 36 months is not permitted unless conversion is made with put or call options. (d) Compulsory credit rating is required if the conversion period for fully convertible debentures exceeds 18 months.

20.3.6 Credit Derivatives

A new financial instrument called credit derivatives was developed in the United States after 1992 to reduce credit risk. It helps banks, finance companies and other investors to manage credit risk by insuring against adverse changes in the quality of borrowers. If the borrowers default, the loss can be offset by gains from the credit derivatives. There are three main types of credit derivatives, namely, (a) credit swaps, (b) credit options, and (c) credit-linked notes. In credit swaps, creditors such as banks can swap the payments from some of their loans for payments from a different institution. A simpler type of credit swap is called a loan portfolio swap. The most common credit swap is called total return swap. Credit options allow investors to buy insurance policy to protect themselves against adverse credit quality movements. If, for example, the bonds default, the payoff from the insurance policy would offset the loss from the bond. The key features of credit options are identical to those of options on stocks. A credit-linked note is a combination of a regular bond and a credit option. It promises to make periodic interest payments and a large lump sum payment when the bond matures, and it also allows the issuer to reduce the notes payments if a key financial variable specified by the note deteriorates. While credit derivatives enable issuers to reduce credit risk, they also expose the users to new financial risks and regulatory costs as in the case of other customised and OTC-traded derivatives because they are privately negotiated financial contracts.

20.3.7 Weather Derivatives

Weather influences our daily lives and choices, and has an enormous impact on corporate revenues and earnings. The risks businesses face due to weather are somewhat unique. Weather conditions tend to affect volume and usage more than they directly affect price. An exceptionally warm winter, for example, can leave

utility and energy companies with excess supplies of oil or natural gas (because people need less to heat their homes). Or, an exceptionally cold summer can leave hotel and airline seats empty. Although the prices may change somewhat as a consequence of unusually high or low demand, price adjustments do not necessarily compensate for lost revenues resulting from unseasonable temperatures. Weather risk is also unique in that it is highly localized, cannot be controlled and despite great advances in meteorological science, still cannot be predicted precisely and consistently. Until recently, insurance has been the main tool used by companies' for protection against unexpected weather conditions. But insurance provides protection only against catastrophic damage. Insurance does nothing to protect against the reduced demand that businesses experience as a result of weather that is warmer or colder than expected. Weather derivatives cover low-risk, high-probability events. Weather insurance, on the other hand, typically covers high-risk, low-probability events, as defined in a highly tailored or customized policy. For example, a company might use a weather derivative to hedge against a winter that forecasters think will be 5°F warmer than the historical average (a low-risk, high-probability event). In this case, the company knows its revenues would be affected by that kind of weather. But the same company would most likely purchase an insurance policy for protection against damages caused by a flood or hurricane (high-risk, low-probability events).

20.3.8 Freight Derivatives

A freight derivative is a financial instrument for trading in future levels of freight rates, for dry bulk carriers and tankers. These instruments are settled against various freight rate indices published by the Baltic Exchange and Platt's FFAs are usually traded over the counter, but screen-based trading is becoming more popular as time passes by. Trades can be given up for clearing by the broker to one of the clearing houses that support such trades. There are four clearing houses on freight: NOS (Norwegian), LCH, Clearnet, NYMEX Clearport, SGX (Singapore). Freight derivatives are primarily used by ship owners and operations, oil companies, trading companies and grain houses as tools for managing freight rate risk.

20.3.9 Property Derivatives

A property derivative is a derivative (finance) whose price and value derives from the value of a real estate asset, usually represented in the form of an index. The product usually takes the form of a total return swap or forward and can adopt a funded format where the property derivative is embedded into a note structure. Under the total return swap or forward the parties will usually take contrary positions on the price movements of a property index.

20.4 SOME IMPORTANT CONCEPTS USED IN DERIVATIVES MARKET

Open Interest Open interest is the total number of outstanding contracts that are held by market participants at the end of each day. Putting it simply, open interest is a measure of how much interest is there in a particular option or future. Increasing open interest means that fresh funds are flowing in the market, whereas declining open interest means that the market is liquidating.

Implied Interest Rate In the futures market, implied interest rate or cost of carry is often used inter-changeably. Cost of carry is more appropriately used for commodity futures, as by definition it means the

total costs required to carry a commodity or any other good forward in time. The costs involved are storage cost, insurance cost, transportation cost, and the financing cost. In case of equity futures, the carry cost is the cost of financing minus the dividend returns. Assuming zero dividends, the only relevant factor is the cost of financing. Implied interest rate is the percentage difference between the future value of an index and the spot value, annualized on the basis of the number of days before the expiry of the contract. Carry cost or implied interest rate plays an important role in determining the price differential between the spot and the futures market. By comparing the implied interest rate and the existing interest rate level, one can determine the relative cost of futures' market price. Implied interest rate is also a measure of profitability of an arbitrage position. Theoretically, if the futures price is less than the spot price plus cost of carry or if the futures price is greater than the spot price plus cost of carry, arbitrage opportunities exist.

Implied Volatility Implied volatility is the estimate of how volatile the underlying will be from the present until the currency of option. If volatility is high, then the options premiums are relatively expensive and *vice versa*. However, implied volatility estimate can be biased, especially if they are based upon options that are thinly traded samples. Implied volatility can be measured entering all parameters into an option pricing model and then solving it for volatility. For example, the Black–Scholes model (BSM) solves for the fair price of the option by using the following parameters: days to expiry, strike price, spot price, and volatility of underlying, interest rate and dividend. This model could be used in reverse to arrive at implied volatility by putting the current price of the option prevailing in the market.

Margin An amount of money deposited by both buyers and sellers of futures contracts to ensure performance of the terms of the contract. The aim of margin money is to minimize the risk of default by either counter party.

Initial margin The amount that must be deposited in the margin account at the time a futures contract is first entered into. The purpose of initial margin is to cover the largest potential loss in 1 day. Both buyer and seller have to deposit margins. This technique of value-at-risk (VaR) is used for calculating this margin.

Maintenance margin The amount that is set aside to ensure that the balance in the margin account never becomes negative is called maintenance margin. It is usually lower than the initial margin. If the balance in the margin account falls below the maintenance margin, the investor receives a margin call.

Variation or mark-to-market margin It is the amount that is deposited as a further collateral to meet daily losses. This margin is required by the close of business, the following day. Any profits on the contract are credited to the client's variation margin account.

Margin-to-market It is the practice of periodically adjusting a margin account by adding or subtracting fund based on changes in market value to reflect the investors' gain or loss. This is to ensure there are no defaults.

Additional margin It is the amount that may be called for by the exchange in case of sudden higher-than-expected volatility. This is a pre-emptive move by the exchange to prevent breakdown.

Basis It is the difference between spot price of an asset and its future price. Even through the spot and future prices generally move in tandem with each other, the basis is not constant.

Contango Under normal market condition, futures contracts are priced above the expected future spot price. This is known as contango.

Backwardation When futures price prevail below the expected future spot price, it is known as backwardation.

Settlement price Daily settlement price is the closing price of the futures contracts for the trading day and the final settlement price is the closing price of underlying asset on the last trading day.

Option Premium It is the price paid by the buyer to the seller to acquire the right to buy or sell.

Strike price It is the pre-decided price at which the option may be exercised. It is also known as the exercise price.

Expiration date The date on which the option expires is known as the expiration date. On the expiration date, either the option is exercised or it expires worthless.

Exercise date It is the date on which the option is actually exercised. In case of European options, the exercise date is same as the expiry date whereas in case of American options, the options contract may be exercised any day between the purchase of contract and its expiry date.

Moneyness It is an option concept that refers to the potential profit or loss from the exercise of an option. An option may be *in the money*, *out of the money*, or *at the money*. These concepts are explained in Table 20.1 given as follows:

Table 20.1 Explanation of the concept of moneyness for call option and put option

	Call Option	*Put Option*
In-the-money	Spot price of underlying asset > strike price ($S > X$)	Spot price of underlying asset < strike price ($S < X$)
At-the-money	Spot price of underlying asset = strike price ($S = X$)	Spot price of underlying asset = strike price ($S = X$)
Out-of-the-money	Spot price of underlying asset < strike price ($S < X$)	Spot price of underlying asset < strike price ($S < X$)

*When the market price is very near to the strike price, the option is called near-the-money option.

20.5 VALUATION OR PRICING OF DERIVATIVES

LO 2
Identify different models used for the valuation of derivatives

We have already discussed the basic approaches to the valuation of different types of securities in chapter 2, the approaches in which the standard discounted cash flow techniques are used. There are certain problems in applying them to the valuation of derivatives. For example, it is impossible to determine the opportunity cost of capital because the risk of a derivative instrument is virtually indeterminate as it changes every time the underlying asset price varies. Therefore, different models are used for valuation of derivatives such as futures and options. Popularly the cost of carry model is used for valuation of futures, and binomial tree and Black–Scholes models are used for valuation of options.

20.5.1 Pricing of Forward Contracts (Financial Assets)

The pricing of forward contracts varies across the nature of the financial assets. Given the spot price of the asset the future price of the asset can be determined. The formula for determination of future price varies across the nature of the asset and the cash flow involved in the asset. Some of the assets do not provide any regular flow of income, some assets provide the perfectly predictable cash income and some assets provide the known yield rather than known cash income.

Following notations are used for pricing the forward contracts:

S_0: spot price today

F_0: futures or forward price

T = time to maturity

r = risk-free rate of return

I = income received from the asset

y = known yield from the asset

e = natural exponential function

(i) Price of the forward contract with no income (e.g. non-dividend paying stocks, zero coupons bonds and so on): $F_0 = S_0 e^{rT}$ (20.1)

Example Let $S_0 = ₹50$, $r = 0.07$, $T = 0.50$, $F_0 = 50e^{0.07 \times 0.50} = ₹51.78$

(ii) Price of the forward contract with known income-paying assets (e.g. stocks paying known dividends and bonds bearing known coupons): $F_0 = (S_0 - I)e^{rT}$ (20.2)

Example Let $S_0 = ₹50$, $r = 0.07$, $T = 0.50$, $I = ₹5$, $F_0 = (50 - 5)e^{0.07 \times 0.50} = ₹46.60$

If $F_0 > (S_0 - I)e^{rT}$, an arbitrageur can lock in a profit by buying the asset and shorting a forward contract on the asset. If $F_0 < (S_0 - I)e^{rT}$ an arbitrageur can lock in a profit by shorting the asset and taking a long position in a forward contract. If short sells are not possible, investors who own the asset will find it profitable to sell the asset and enter into long forward contracts.

(iii) Price of the forward contract with known yield paying assets (the income is expressed as a percent of the asset's price): $F_0 = S_0 e^{(r - y)T}$ (20.3)

Note that if the yield of the asset is greater than the risk-free interest rate, then the forward price will be less than the spot price, since the holder of the asset is earning a greater yield than the risk-free interest rate.

Example Let $S_0 = ₹50$, $r = 0.07$, $T = 0.50$, $y = 0.03$, $F_0 = (50)^{e(0.07 - 0.03) \times 0.50} = ₹51.01$

The value of the forward contract at the time it first entered into is zero. At the later stage, the value may be positive or negative. The value of the contract depends upon the delivery price (K) which is negotiated before. At the beginning of the life of the contract, the delivery price (K) is set equal to the forward price (F_0), and the value of the contract (f) = 0. As time passes (K) stays same (as per the contract), but the forward price changes and the value of the contract becomes either positive or negative.

The value of a long forward contract (f) = $(F_0 - K)e^{-rT}$ (20.4)

The value of a short forward contract (f) = $(K - F_0)e^{-rT}$ (20.5)

Using the equation (20.4) in conjunction with equation (20.1) the value of a forward contract on an asset that provides no income

$$(f) = S_0 - Ke^{-rT} \quad (20.6)$$

Using the equation (20.4) in conjunction with equation (20.2) the value of a long forward contract on an asset that provides a known income with present value (I)

$$(f) = S_0 - I - Ke^{-rT} \tag{20.7}$$

Using the equation (20.4) in conjunction with equation (20.3) the value of a long forward contract on an asset that provides a known yield at the rate (y)

$$(f) = S_0e^{-yT} - Ke^{-rT} \tag{20.8}$$

The gain or loss of the futures contract is calculated as the future price change multiplied by the size of the position.

20.5.2 Pricing of Future Contracts (Commodities)

For the valuation of future contracts on commodities, first we consider the impact of storage on the futures commodity prices that are investment assets, such as gold and silver. Storage cost can be regarded as negative income. If C is the present value of all the storage costs that will be earned during the life of forward contract. The future price can be calculated using the equation given below:

$$F_0 = (S_0 + C)e^{rT} \tag{20.9}$$

If the storage cost net of income incurred at any time is proportional to the price of the commodity, it can be treated as negative yield (c) and the equation will be as follows:

$$F_0 = S_0e^{(r+c)T} \tag{20.10}$$

The small (c) denotes the storage cost per annum as a proportion of the spot price net of any yield earned on asset.

Convenience yield is the additional value gained by holding the asset rather than having a long forward or futures contract on the asset, such as the ability to take advantage of shortages. Oil, for instance, is primarily a consumption asset and has a convenience yield because the holder of the asset can sell at higher prices during shortages. If the amount of storage cost is known and its present value is (C), then the convenience yield (i) is defined as follows:

$$F_0\, e^{iT} = (S_0 + C)e^{rT} \tag{20.11}$$

If the storage cost per unit is a constant proportion (c) of the spot price, then (i) is defined so that

$$F_0\, e^{iT} = S_0e^{(r+c)T} \text{ or } F_0 = S_0e^{(r+c-i)T} \tag{20.12}$$

The convenience yield is used to predict the market expectations about the future availability of the commodity. Higher the possibility that shortage will occur, the higher the convenience yield. Higher the inventories of the commodities lower will be the convenience yield.

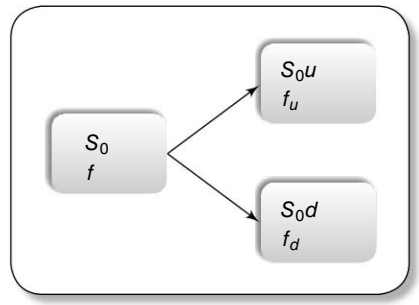
The relationship between future price and spot price of the assets can be shown in terms of the *cost of carry*. For a non-dividend paying stock, the cost of carry is the risk-free rate of return (r). For dividend paying stocks and stock index, it is ($r - y$) as income is earned at rate (y) on the asset, for a commodity that provides income at rate (i) and requires storage cost (c), it is ($r - i + c$).

20.5.3 Binomial Option Pricing Models

The binomial option pricing model, as proposed by Cox, Ross and Rubinstein in 1979, is a useful tool for valuation of options. This method employs a binomial tree or binomial lattice, which represents the possible paths that may be followed by an underlying security throughout the life of an option. This technique assumes that the underlying assets follow a random walk and there is no arbitrage opportunity exists in the market.

The one-step Binomial Model

We construct a portfolio having a long position in amount of stocks and short position in an option. Assume that the current value of stock is S_0 and current price of the option on stock is f. Suppose the option get matured on time T and during the life of the option the value of underlying stock may move up to S_0u or goes down to S_0d. The percentage increase in stock price when it moves up is $u - 1$ (as $u > 1$) and the percentage decrease in stock price when it comes down is $1 - d$ (where $d < 1$). Similarly, we expect the payoff from the option is f_u when the stock value is S_0u and the payoff is f_d when the price of the stock moves down to S_0d.



We intend to calculate the value of which makes our portfolio riskless. If the stock price goes down, then the payoff from the portfolio will be $S_0d\Delta - f_d$. And if the value of the stock moves up, then the payoff from the portfolio will be $S_0u\Delta - f_u$. The two payoffs are equal when

$$S_0u\Delta - f_u = S_0d\Delta - f_d$$

Solving the above equation, we can derive the value of as follows:

$$\Delta = \frac{f_u - f_d}{S_0u - S_0d} \tag{20.13}$$

Here, Δ implies the ratio of change in the option prices to the change in the value of the stock.

Assume that our portfolio is risk-free and there is no arbitrage opportunity exists in the market. Hence, the portfolio must earn at risk-free rate of return 'r' if invested for time 'T'. The present value of portfolio will be as follows:

$$(S_0u\Delta - f_u)e^{-rT}$$

The cost of the portfolio is

$$S_0\Delta - f$$

For, risk-neutrality of the portfolio

$$S_0\Delta - f = (S_0u\Delta - f_u)e^{-rT}$$

Substituting the value of Δ [from equation (20.13)] and then solving the equation, we will get

$$f = \frac{f_u(1 - de^{-rT}) + f_d(ue^{-rT} - 1)}{u - d}$$

or

$$f = e^{-rT}[Pf_u + (1 - P)f_d] \tag{20.14}$$

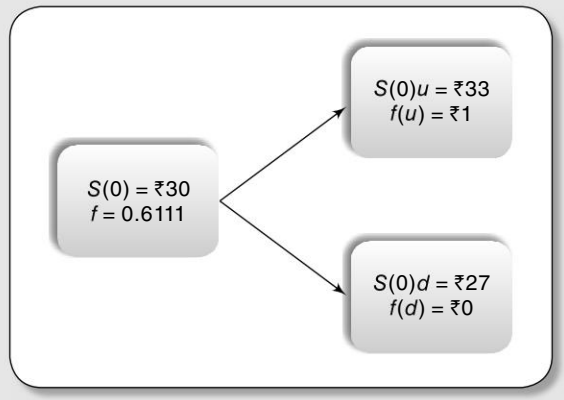
where

$$P = \frac{e^{rT} - d}{u - d} \tag{20.15}$$

The equation (20.14) and equation (20.15) can be used for pricing options.

Example The current price of a stock is ₹30, and it is known that at the end of 3 months it will be either ₹33 or ₹27. The strike price of the call option of this stock is ₹31. After 3 months if the stock price turns out to be ₹33, the value of the option will be ₹1; if the stock price turns out to be ₹27, the value of the option will be zero. The risk free rate of interest is 10 percent. Determine the value of the call option. We have

$S(0) = ₹30$, $T = 0.25$ (3 months), $f(u) = 1$ if $S(0)u = ₹33$ and $f(d) = ₹0$ if $S(0)d = ₹27$. From this we find that $u = 1.1$ and $d = 0.9$. The diagrammatic representation will be as follows:



Using equation (20.15), we can obtain the value of P as follows:

$$P = \frac{e^{0.10 \times 0.25} - 0.9}{1.1 - 0.9} = 0.626$$

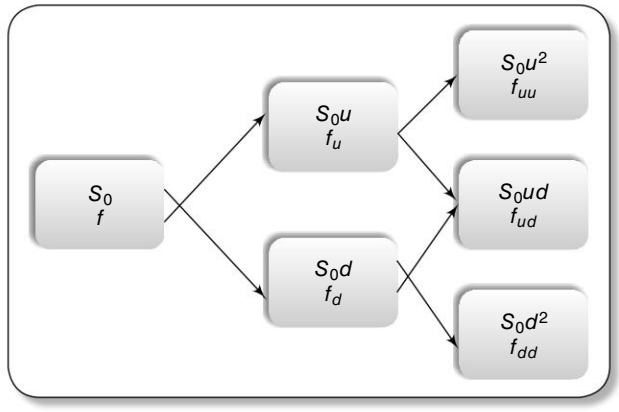
Now, compute the value of P in equation (20.14) to get the value of option

$$f = e^{-0.10 \times 0.25}\,[0.626 \times 1 + (1 - 0.626) \times 0] = 0.6111$$

Therefore, the value of European call option is found to be 0.6111.

Two-step Binomial Model

The two-steps binomial model is an extension of one-step model with the same assumptions, that is, no arbitrage principle. Consider the following figure:



The initial price of the stock is $S(0)$. After every time step, the price will either move up by u times $S(0)$ or moves down by d times $S(0)$. We suppose that the risk-free rate is r and the time length is Δt. Using this notation if we rewrite the equation (20.14) and equation (20.15), then it will become

$$f = e^{-r\Delta t}[Pf_u + (1 - P)f_d] \tag{20.16}$$

$$P = \frac{e^{r\Delta t} - d}{u - d} \tag{20.17}$$

As shown in the above figure, we repeat the application of equation (20.16)

$$f_u = e^{-r\Delta t}[Pf_{uu} + (1 - P)f_{ud}] \tag{20.18}$$

$$f_d = e^{-r\Delta t}[Pf_{ud} + (1 - P)f_{dd}] \tag{20.19}$$

$$f = e^{-r\Delta t}[Pf_u + (1 - P)f_d] \tag{20.20}$$

Now substituting the value of equation (20.18) and equation (20.19) in equation (20.20), we will get

$$f = e^{-2r\Delta t}[P^2 f_{uu} + 2P(1 - P)f_{ud} + (1 - P^2)f_{dd}] \tag{20.21}$$

This is consistent with risk-neutral pricing as done in the one-step binomial model. Here, the variables P^2, $2P(1 - P)$ and $(1 - P^2)$ are the probabilities that the upper, middle and final nodes will be reached.

Example Consider a 2-year European put with a strike price of ₹56 on a stock whose current price is ₹52. We suppose that there are two time steps of 1 year, and in each time step the stock price either moves up by 20 percent or moves down by 20 percent. Assume that the risk-free interest rate is 5 percent. Determine the current price of put option.

Here, $u = 1.2$, $d = 0.8$, $S(0) = ₹50$, $\Delta t = 1$ and $r = 0.05$, the strike price = ₹56.

The risk-neutral probability can be obtained by using the equation (5) as

$$P = \frac{e^{0.05 \times 1} - 0.8}{1.2 - 0.8} = 0.6282$$

The possible stock prices at 2 years are ₹74.88, ₹49.92 and ₹33.28, respectively, for upper, middle and lower nodes. Hence, the respective option prices will be ₹0, ₹6.08 and ₹22.72. Now, using equation (20.21) we can determine the current price of the put option as follows:

$$f = e^{-2 \times 0.05 \times 1} [0.6282^2 \times 0 + 2 \times 0.6282(1 - 0.6282) \times 6.08 + (1 - 0.6282^2) \times 22.72] = ₹5.411$$

20.5.4 Black–Scholes Model (BSM)

The Black–Scholes option pricing model was developed by Fisher Black, Myron Scholes and Robert Merton in 1973. This model gained its popularity when Myron Scholes and Robert Merton were conferred Nobel prize in the 1997 for their outstanding contribution for valuation of options. The BSM is based on the following assumptions: (a) The call option is the European option. (b) The underlying stock (asset) does not pay any dividend. (c) The stock (asset) price is continuous and is distributed lognormally. (d) Taxes and transactions costs are absent. (e) The restrictions on or penalties for short selling are absent. (f) The risk-free interest rate is known and constant.

In order to understand the Black–Scholes differential equation and pricing formula for determination of call option and put option, we need to understand some fundamental properties of the underlying assets.

Weiner Process

A time dependent random variable is known as a stochastic process or the value of a variable which changes with respect to every unit of time in an uncertain way is known as stochastic process. Weiner process or Brownian motion is a special type of stochastic process where the mean of the variable is 0 and variance is 1. We can generalize the Weiner process for any variable x which follows a stochastic process as follows:

$$dx = adt + bdz \tag{20.22}$$

This equation (20.22) has two components. The first component adt which implies x has an expected drift rate of a per unit time. The second component is known as variance, which is represented as b^2 and dz represents a Brownion motion or Weiner process whose mean is zero and variance is one. This concept was further extended by Ito, who proposes that a and b are the functions of the underlying asset's value and time. This is popularly known as *Ito process* and represented as follows:

$$dx = a(x, t)\, dt + b(x, t)dz \tag{20.23}$$

We can further elucidate the equation (20.23) by applying Ito lemma. Ito lemma depicts that a function G of x and t follow a process, that is,

$$dG = \left(\frac{\partial G}{\partial x} a + \frac{\partial G}{\partial t} + \frac{1}{2} \frac{\partial^2 G}{\partial x^2} b^2 \right) dt + \frac{\partial G}{\partial x} bdz \tag{20.24}$$

This is similar to Ito process where the drift component is $\left(\frac{\partial G}{\partial x} a + \frac{\partial G}{\partial t} + \frac{1}{2} \frac{\partial^2 G}{\partial x^2} b^2 \right)$ and the variance component as $\left(\frac{\partial G}{\partial x} \right)^2 b^2$.

Stock Price Model

Consider a non-dividend paying stock of which the price at time 't' is S and the expected drift is μS, where μ is a constant parameter. For any short time interval Δt, the change in price of the stock will be $\mu S\Delta t$. In this case, μ represents the expected stock return. In the absence of any uncertainty, the model can be presented as follows:

$$\Delta S = \mu S\Delta t \tag{20.26}$$

In the limit, when ($\Delta t \to 0$)

$$dS = \mu Sdt \tag{20.27}$$

However, in the real world the assumption of absence of uncertainty is proven to be myth and the equation can be rewritten as follows:

$$dS = \mu Sdt + \sigma Sdz \tag{20.28}$$

$$\frac{dS}{S} = \mu dt + \sigma dz \tag{20.29}$$

Now, if we apply the Ito lemma in the stock price model as shown in equation (20.26), then the equation can be reframed as follows:

$$dG = \left(\frac{\partial G}{\partial S}\mu S + \frac{\partial G}{\partial t} + \frac{1}{2}\frac{\partial^2 G}{\partial s^2}\sigma^2 S^2\right)dt + \frac{\partial G}{\partial S}\sigma Sdz \tag{20.30}$$

where, G is a function of S and t, μ represents the expected rate of return of the stock, σ as the volatility of the stock and dz follows a Weiner process.

The Lognormal Property of an Underlying Asset

Assume that the underlying stock of a derivative instrument 'S' follows a distribution as shown in equation (20.28). We would like to find out the distribution of ln S by applying the concept of Ito lemma. Hence, G = ln S such that

$$\frac{\partial G}{\partial S} = \frac{1}{S}; \frac{\partial^2 G}{\partial s^2} = -\frac{1}{s^2} \text{and} \frac{\partial G}{\partial t} = 0 \text{ as } G \text{ is independent of time}$$

Substituting the above values in equation (7), we will get

$dG = \left(\frac{1}{s}\mu S + 0 - \frac{1}{2}\frac{1}{s^2}\sigma^2 S^2\right)dt + \frac{1}{s}\sigma Sdz$; solving this equation will give rise to

$$dG = \left(\mu - \frac{1}{2}\sigma^2\right)dt + \sigma dz \tag{20.31}$$

Equation (20.31) is similar to equation (20.28), where the drift rate is $\left(\mu - \frac{1}{2}\sigma^2\right)$ and variance is σ^2. This means in between any two time points, say 0 and T in a future time, ln S is normally distributed with mean $\left(\mu - \frac{1}{2}\sigma^2\right)T$ and variance $\sigma^2 T$ It can be represented as follows:

$$\ln S_T - \ln S_0 \sim \varnothing\left[\left(\mu - \frac{1}{2}\sigma^2\right)T, \sigma^2 T\right] \text{ or } \ln S_T \sim \varnothing\left[\ln S_0 + \left(\mu - \frac{1}{2}\sigma^2\right)T, \sigma^2 T\right] \tag{20.32}$$

In equation (20.32), S_T represents the price of a stock at future time T and S_0 reflects the current price of the stock. It is clearly depicted in the above equation that a variable is said to be lognormally distributed if the natural logarithm of the variable is normally distributed. For the option pricing, we assume that the underlying asset follow a lognormal distribution and the returns from the asset follow a normal distribution. It is also clearly reflected from equation (20.32) that the mean of S_T is $S_0 + \left(\mu - \frac{1}{2}\sigma^2\right)T$ and standard deviation is $\sigma\sqrt{T}$. Unlike normal distribution, the lognormal distribution is skewed and, hence, the mean, median and mode all are different.

Derivation of Black–Scholes–Merton Differential Equation

We can presume it as an extension to binomial options pricing model, where the focus is to create a risk neutral portfolio using the no arbitrage assumption. The underlying assumptions of this model are as follows:

- The stock price follows a geometric Brownian motion.
- The short selling of securities is allowed.
- There is no transaction cost and tax.
- Any amount of securities can be purchased or sold at risk-free rate.
- Securities are traded continuously in the market.
- There are no arbitrage opportunities that exist in the market.

As evident from equation (20.28), the stock price follows a process

$$dS = \mu S dt + \sigma S dz$$

Consider that 'f' denotes the price of a call option and it is a function of S and t, then using Ito lemma we can obtain

$$df = \left(\frac{\partial f}{\partial S}\mu S + \frac{\partial f}{\partial t} + \frac{1}{2}\frac{\partial^2 f}{\partial S^2}\sigma^2 S^2\right)dt + \frac{\partial f}{\partial S}\sigma S dz$$

The above two equations are in the continuous forms, the discrete version of these equations would be as follows:

$$\Delta S = \mu S \Delta t + \sigma S \Delta z \tag{20.33}$$

$$\Delta f = \left(\frac{\partial f}{\partial S}\mu S + \frac{\partial f}{\partial t} + \frac{1}{2}\frac{\partial^2 f}{\partial S^2}\sigma^2 S^2\right)\Delta t + \frac{\partial f}{\partial S}\sigma S \Delta z \tag{20.34}$$

Now, we will try to eliminate the Weiner process (Δz) in the above equation. In order to do that let us create a portfolio of shorting one call option and long $\frac{\partial f}{\partial S}$ amount of shares, so the value of the portfolio will be as follows:

$$\Pi = -f + \frac{\partial f}{\partial S}S$$

In small time interval Δt, the changes in the value of the portfolio can be given as follows:

$$\Delta\Pi = -\Delta f + \frac{\partial f}{\partial S}\Delta S \tag{20.35}$$

Now, substituting the value of Δf and ΔS in equation (20.35), we reframe the equation as follows:

$$\Delta\Pi = \left(-\frac{\partial f}{\partial t} - \frac{1}{2}\frac{1^2 f}{\partial S^2}\sigma^2 S^2 \right)\Delta t \tag{20.36}$$

As the equation (20.36) does not contain the Weiner process, so the portfolio can be assumed to be risk-less and the portfolio can earn at risk-free rate of interest like other short-term risk-free securities. Hence, the value of the portfolio in a short-time interval Δt will be (considering no arbitrage principle)

$$\Delta\Pi = r\Pi\Delta t$$

Substituting the values of $\Delta\Pi$ and Π from previous equations, we can have

$$\left(\frac{\partial f}{\partial t} + \frac{1}{2}\frac{\partial^2 f}{\partial S^2}\sigma^2 S^2 \right)\Delta t = r\left(f - \frac{\partial f}{\partial S} S \right)\Delta t$$

The simplification of the above equation will give rise to

$$\frac{\partial f}{\partial t} + rS\frac{\partial f}{\partial S} + \frac{1}{2}\frac{\partial^2 f}{\partial S^2}\sigma^2 S^2 = rf \tag{20.37}$$

The equation (14) is popularly known as the Black–Scholes–Merton differential equation. The solution of the differential equation depends upon the nature of the underlying assets used and boundary conditions. To be specific to European call option the boundary conditions are as follows:

$$f = \max(S - K, 0), \text{ when } t = T$$

For European put option,

$$f = \max(K - S, 0), \text{ when } t = T$$

It can be noticed that the portfolio used for the derivation of this differential equation is not permanently risk neutral; it is for as infinitely small time interval (Δt). To make the portfolio risk-free for all the time period, one has to continuously change the composition of the portfolio, that is, option and amount of shares.

Black–Scholes Option Pricing Formula

The BSM posits that the value of the call option depends on the following five primary variables: (i) the current market price of the underlying stock (asset), (ii) the exercise price of the option, (iii) the time to maturity or time remaining to the expiration of the option contract, (iv) the level of market interest rates, (v) the volatility or variability of the underlying stock (asset) price, that is, the expected standard deviation or variance in the return of the underlying stock.

The following formula can be used to determine the price of a call option and a put option.

$$c = S_0 N(d_1) - Ke^{-rT} N(d_2)$$

$$p = Ke^{-rT} N(-d_2) - S_0 N(-d_1)$$

$$d_1 = \frac{\ln(S_0/K) + (r + \sigma^2/2)T}{\sigma\sqrt{T}}$$

$$d_2 = d_1 - \sigma\sqrt{T}$$

C = Price of call option

K = Strike price or exercise price of an option

r = Risk-free rate of interest

S_0 = The current price of the stock

T = Time to maturity

$N(d_1)$ and $N(d_2)$ as the normal distributions of d_1 and d_2.

σ = Standard deviation or volatility of a stock

The longer the life of the call option, the greater the opportunity for the price of the stock to move above the exercise price. Analytically, the variance of the distribution of returns or price changes increases with time. This increased variance due to the lengthening of the time horizon gives greater value to the option. However, the relationship between time and value is not proportional. The time value of an option is the greatest when the market price and the exercise price are equal. If the option is already in the money, a rise in the stock (asset) price will not result in the same percentage gain in the option price that would occur in the previous situation. For out-of-the-money-option, part of the time remaining will be used for the price of the stock (asset) to reach the exercise price. The interest rates affect the option values because of the opportunity cost involved. Buying an option is a substitute for buying on margin on which interest has to be paid. Higher interest rates, therefore, mean greater saving in interest costs by the use of options. This adds to the value of the option, and there is a direct or positive relationship between the value of a call option and interest rates in the market. Volatility measures the risk. The greater the risk, the higher the price of a call option because of the increased potential for the stock to move up. There is, thus, a positive relationship between stock volatility and the value of the option; the variance of the return of the stock is a prime determinant of the option value.

Example Consider a non-dividend paying stock of current market price ₹52 which is the underlying asset of an option of maturity 6 months and strike price ₹50. If the risk-free rate of interest is 10 percent per annum and volatility is 20 percent, then determine the price of call option and put option.

$$S_0 = ₹52,\ K = ₹50,\ r = 0.1,\ \sigma = 0.2,\ T = 0.5$$

$$d_1 = \frac{\ln(52/50) + (0.1 + 0.2^2/2)0.5}{0.2\sqrt{0.5}} = 0.7015$$

$$d_2 = 0.7015 - 0.141 = 0.560$$

$$N(d_1) = 0.758$$

$$N(d_2) = 0.712$$

The normal distribution can be calculated using NORMSDIST function in excel.

$$c = 52 \times 0.758 - 50e^{-0.1 \times 0.5} \times 0.712 = 5.56$$

Similarly, using the above values the put option can be calculated as follows:

$$p = Ke^{-rT} N(-d_2) - S_0 N(-d_1)$$

$$p = 50e^{-0.1 \times 0.5} \times 0.287 - 52 \times 0.241 = 1.12$$

Merits of BSM

The BSM is complex to derive, but it provides a compact expression that can be relatively easily modified to derive option values. The model is based on the notion that it is possible, given the above-mentioned assumptions, to set up a perfectly hedged investment position, that is, a position in which, over a stock price interval close to the current price, any profit resulting from an instantaneous increase in the price of the stock would be exactly offset by an instantaneous loss on the option position, or *vice versa*. It is developed from the principle that options can completely eliminate market risk from a stock portfolio. Given that risk-free hedge should earn risk-free rate, it can be inferred that the option premium, at which the hedge yields a return equal to the risk-free short-term interest rate, is the fair value of the option. If the price of the option is greater or less than the fair value, the return from the risk-free hedge would be different from risk-free interest rate, which is inconsistent with the equilibrium, and, therefore, the option price can be expected to return towards its fair value.

Limitations of BSM

Although the BSM is theoretically elegant and widely popular, there are some problems in its practical application. First, its basic assumption that a riskless hedge can be set up by rebalancing continuously and instantaneously is unrealistic. In actual practice, transaction costs would impede such rebalancing, and they can eventually dissipate any investment return. The assumption of risk-free rate of interest is also unrealistic. The differences in the estimates of interest rate and standard deviation of annual price changes of the underlying stock can affect the actually calculated option values very significantly. The high sensitivity of option values to variations in such inputs highlights the need for avoiding input errors while using the BSM. The BSM model has been developed to value call options. But it can also be used to value put options indirectly, that is, by relating the derived value of a call to that of a put. For valuing a put, a value of a matching call is to be obtained, to which is added an amount equal to the present value of the exercise price, and from this sum, an amount which is equal to the current market price of the underlying common stock is subtracted.

20.6 DERIVATIVES MARKET IN INDIA: PROSPECTS AND POLICY

LO 3

Understand the prospects and policy of derivatives market in India

Before the emergence of proper forward market in India a system defined as *Badla* system was largely operating in Indian market. *Badla* refers to that system whereby the buyer or seller of shares may be allowed to postpone payment of money or delivery of the shares as the case may be, in return for paying or receiving a certain amount of money. There are differences between *badla* and forward trading. (i) The price of the future contract is defined in advance in the forward trading where as in *badla* it is known only at the time of final settlement. (ii) Forward trading is for a specific period, defined in advance whereas in *badla* the period of transaction is undefined as the transaction can be carry forwarded indefinitely from settlement to settlement. (iii) In forward transaction, there is a margin payment whereas in old *badla* system no margin was required. In general, it can be argued that *badla* has an indeterminate price, so there is no relationship between spot price and future price and the future price is uncertain, which means that *badla* trading cannot be used for hedging. Over the time, the carry forward system has been revised and modified many times with the recommendations of G S Patel Committee (1995) and J R Varma Committee (1997).

Since independence, the Government of India has appointed various committees time to time to devise the proper regulatory framework for development of derivatives market in India. A D Shroff Committee (1950) which formed the basis of the Forward Contracts (Regulation) Act, 1952, M L Dantwala Committee (1966) and A M Khusra Committee (1979) which reviewed the functioning of Forward Market Commission, K N Kabra Committee (1994) for development of commodity derivatives market, L C Gupta Committee (1997) for devising appropriate regulatory framework for derivatives trading in India and J R Varma committee (1998) to recommend measures for risk containment in derivatives market in India. Further some more review committees are also appointed to devise the regulations for derivatives market in India. Major developments and recommendations by the major committees are given as follows.

20.6.1 Major Policy Developments

1. The forward markets in certain commodities have existed in India for a long time. The Forward Markets Commission allows the execution of NTSDCs, TSDCs and futures contracts (in which actual delivery is not compulsory) in certain commodities. Forward trading is allowed in six commodities, namely, turmeric, castor seeds, hessian (jute fibre) potatoes, cotton and paper. Prior to July 1997, only NTSDCs were allowed in cotton trading while futures contracts were allowed in raw jute, castor seeds and pepper. With effect from 8 July, 1997, futures trading in castor oil, cotton and jute goods also has been allowed for an initial period of 3 years. Similarly, untraded options in commodities have also existed in India for many years.
2. As far as the financial derivatives are concerned, the only ones which existed for a long time were non-tradable warrants, convertibles, non-tradable buy-back options on industrial debentures and units of mutual funds and forward exchange contracts or currency forwards. However, the picture has been changing over the years during which certain new derivative products have been introduced, albeit on a small scale. In January 1995, the Securities Contracts (Regulation) Act was amended whereby a reference in theAct to 'prohibition of options' has been deleted. This has opened the possibility of starting options trading in India. Around August 1996, the NSE had planned to introduce stock index futures and options in three stages spread over a period of about a year, that is, by the end of 1997. There were also plans to introduce NIFTY- or NSE-50-index-based futures by December 1996, the same index-based options by July 1997 and options in select (top) scrips by December 1997. The NSE launched Futures and Options Exchange (F&OE) in late 1996, but its three-stage plan has remained largely unimplemented.
3. The response to this (liberalised) policy was not encouraging due to high costs of instruments, and because the corporates themselves were not allowed to write options. Similarly, options were allowed to be sold to the customers against their underlying foreign exchange exposure by ADs only, and the former could sell the options back to the latter only once during the course of its tenure. In January 1997, the RBI amended these regulations and allowed the corporates themselves to write cross-currency options, and to book and cancel them freely without prior approval. However, it has been specified that there should be no net inflow of premium to the corporates under these contracts, so that the corporates do not speculate and book contracts at off-market prices and risk themselves to large potential losses.

RBI Guidelines Permitting Banks to Offer Hedge Instruments

In October 1996, the RBI liberalised the policy on derivatives and issued the following guidelines permitting banks to offer hedge instruments to the corporates.

- The authorised dealers (ADs) in foreign exchange can offer cross-currency options and interest rate derivatives (swaps, caps, collars), currency swaps and forward rate agreements (FRAs).
- These products can be offered by way of booking the transactions overseas or on back-to-back basis.
- The ADs can remit up front premia and other charges incidental to hedge transactions without prior approval of the RBI.
- Corporate bodies have to maintain and furnish reports showing complete details of all transactions (booked as well as cancelled) to the RBI within a week of the conclusion of a transaction, a quarterly report of all such transactions to their Boards, and the annual certificate from the statutory auditors that all the prescribed terms and conditions have been complied with. All these requirements are meant to ensure proper accounting of derivative transactions.
- The authorised dealers will ensure that the RBI has accorded the final approval for the conclusion of the underlying loan transaction.
- They will see to it that the notional principal amount of the hedge does not exceed the outstanding amount of the foreign currency loan; that the maturity of the hedge does exceed the remaining life of the underlying loan; and that the board of directors of the company has approved the financial limits, and has authorised designated officials to enter the hedge transactions.

4. Since April 1997, the RBI has allowed banks and corporates to deal in swaps without its permission, for tenors over 6 months. But speculative trading in FRAs is not allowed; banks are not permitted to run a book, that is, to take a position which is not backed by an underlying trade transaction. The first 5-year dated rupee currency swaps were booked in India in June 1997.

5. Subsequently, SEBI set up a committee under Chairmanship of Dr. L C Gupta to recommend an appropriate regulatory framework for derivatives trading in India. The committee submitted its report in December 1997. The summary of the report is as follows:[1]
   - Financial derivatives should be introduced in the Indian market in order to provide the facility for hedging in the most cost-efficient way against market risk. At the same time, it recognises that in order to make hedging possible, the market should also have speculators who are prepared to be counter-parties to hedgers.
   - There is need for three types of derivatives in India, that is, equity derivatives, interest rate derivatives and currency derivatives. In the case of equity derivatives, while the committee believes that the type of derivatives contracts to be introduced will be determined by market forces under the general oversight of SEBI and that both futures and options will be needed, the committee suggests that a beginning may be made with stock index futures.
   - The committee favours the introduction of equity derivatives in a phased manner so that the complex types are introduced after the market participants have acquired some degree of comfort and familiarity with the simpler types. This would be desirable from the regulatory angle too.

[1]SEBI, Report of the Committee to Develop Appropriate Regulatory Framework for Derivatives Trading in India, September 1997.

- The committee's recommendations on regulatory framework for derivatives trading envisage two-level regulation, that is, exchange-level and SEBI-level. The Committee's main emphasis is on exchange-level regulation by ensuring that the derivative exchanges operate as effective self-regulatory organisations under the overall supervision of SEBI.
- Since the committee has placed considerable emphasis on the self-regulatory competence of derivatives exchanges under the over-all supervision and guidance of SEBI, it is necessary that SEBI should review the working of the governance system of stock exchanges and strengthen it further. A much stricter governance system is needed for the derivative exchanges in order to ensure that a derivative exchange will be a totally disciplined market place.
- The committee is of the opinion that the entry requirements for brokers/dealers for derivatives market have to be more stringent than for the cash market. These include not only capital adequacy requirements but also knowledge requirements in the form of mandatory passing of a certification programme by the brokers/dealers and the sales persons. An important regulatory aspect of derivatives trading is the strict regulation of sales practices.
- Many of the SEBI's important regulations relating to exchanges, brokers-dealers, prevention of fraud, investor protection, and so on, are of general and over-riding nature and, hence, these should be reviewed in detail in order to be applicable to derivatives exchanges and their members.
- The Committee has recommended that the regulatory prohibition on the use of derivatives by mutual funds should go. At the same time, the committee is of the opinion that the use of derivatives by mutual funds should be only for hedging and portfolio balancing and not for speculation. The responsibility for proper control in this regard should be cast on the trustees of mutual funds. The committee does not favour framing of detailed SEBI regulations for this purpose in order to allow flexibility and development of ideas.
- SEBI, as the overseeing authority, will have to ensure that the new futures market operates fairly, efficiently and on sound principles. The operation of the underlying cash markets, on which the derivatives market is based, needs improvement in many respects. The equity derivatives market and the equity cash market are parts of the equity market mechanism as a whole.
- SEBI should create a Derivatives Cell, a Derivatives Advisory Committee, and Economic Research Wing. It would need to develop a competence among its personnel in order to be able to guide this new development along sound lines.

6. In June 1998, SEBI set up a committee under the Chairmanship of Prof. J R Varma, to recommend measures for risk containment in derivatives market in India. This committee submitted its report in October 1998 giving operational details of margining system, methodology for charging initial margins, broker net worth, deposit requirement and real-time monitoring requirement.
7. In December 1999, amendment to SC(R)A was notified, making way for derivatives trading in India. In June 2000, Futures contracts on Nifty and Sensex were launched, followed by Options contracts on Nifty and Sensex (European style), Options contracts on stocks (American style) and Futures contracts on stocks in June, July and November 2001, respectively.
8. To expand the universe of risk hedging products available to the market, interest rate futures were launched in June 2003. However, the product did not pick up as the design of the product had some flaws and also banks were not permitted to take trading positions in these instruments. The product was reintroduced and RBI permitted banks to take trading positions in October 2008.

9. Recognising the need for a robust interest rate futures market as an effective instrument for management of interest rate risk and, in pursuance of the recommendation of the Reserve Bank's technical advisory committee (TAC) on money, foreign exchange and government securities markets, a working group on interest rate futures (Chairman: Shri V K Sharma) was set up in August 2007 to go into all the relevant issues and to suggest measures to facilitate further development of interest rate futures market. The *recommendations of Sharma committee* were as follows:
   - The banks should be allowed to take trading positions in IRF subject to prudential regulations including capital requirements. Further, the current approval for banks' participation in IRF for hedging risk in their underlying investment portfolio of government securities classified under the Available for Sale (AFS) and Held for Trading (HFT) categories should be extended to the interest rate risk inherent in their entire balance sheet—including both on, and off, balance sheet items—synchronously with the re-introduction of the IRF.
   - The present dispensation to hold the entire SLR portfolio by banks in HTM category should be reviewed synchronously.
   - RBI, using the powers conferred on it through the RBI Amendment Act, 2006, mandate appropriate accounting standards for IRS, IRF and the underlying GoI securities as envisaged in AS 30 to ensure that these are symmetrical and aligned.
   - The time limit on short selling in the cash market should be extended so that term/tenor/maturity of the short sale is co-terminus with that of the futures contract and a system of transparent and rule-based pecuniary penalty for SGL bouncing be put in place, in lieu of the punitive regulatory penalty currently in force.
   - It would be necessary to improve the liquidity and efficiency of the repo market.
   - The FIIs may be allowed to take long position in the IRF market, subject to the condition that the total gross exposure in the cash and the IRF market does not exceed the maximum permissible cash market exposure limit which is currently USD 4.7 billion. They may also be allowed to take short position in IRF only to hedge exposure in the cash market up to the maximum permitted limit which is currently USD 4.7 billion. The same may also apply, *mutatis mutandis*, to NRIs participation in IRF.
   - To begin with, one IRF contract based on a notional, coupon bearing, 10-year GoI security be introduced in the bond futures segment. Depending upon the market response and appetite, the exchanges concerned may consider introducing contracts based on 2-year, 5-year and 30-year GoI securities or those of any other maturities or coupons.
   - The contract should be physically settled and whatever microstructure changes are necessary including improvements in the liquidity of the underlying market to support such a contract must be carried out.
   - The existing contract on 91-day Treasury bills futures may be retained but with settlement price based on the yield discovered at the weekly RBI auction. Besides, a contract based on an index of traded/actual call rates may also be considered.
   - To begin with, delivery-based, longer term/tenor/maturity short selling in the cash market may be allowed only to banks and PDs.
10. SEBI set up a Derivatives Market Review Committee, in March 2007, to look into the developments in derivatives market in India and also suggest future possibilities and course of action. The committee,

in December 2007, recommended introduction of certain new derivative instruments based on global experience and the perceived appetite for new products in the Indian markets. These included mini contract in equity indices; long-term option contracts, options on futures; exchange-traded currency futures and exchange-traded products involving different strategies. Based on these recommendations, the new products that have been launched by the NSE in 2008 are the mini Nifty contracts, long tenure options and exchange-traded currency futures. The nature of the new products is explained below.

- **Mini Contracts in Equity Indices:** Mini contract will be a fraction of normal derivative contract. Smaller contract size means greater affordability for individual investors. Smaller contract size, apart from helping the individual investor to hedge risks of a smaller portfolio, offers lower levels of risk in terms of smaller level of possible downside compared to a big size contract. Popularity of mini contracts has been increasing due to the higher liquidity and the ability to get in and out of a trade quickly with low impact cost. It was proposed to introduce initially mini contracts in both index futures and index options with Sensex/Nifty 50 as the underlying. These two contracts were introduced on 1 January, 2008.
- **Options Contracts with Longer Life/Tenure:** Currently, in India, exchange-traded equity options have a maximum life of 3 months. Many of the investors who have a long-term view on the market do not find a direct options product with which this could be achieved. Structurally, long-term options are no different from short-term options, but the later expiration dates offer the opportunity for long-term investors to take a view on prolonged price changes without needing to use a combination of shorter-term option contracts. The premiums for long-term options tend to be higher than that of short-term options because the increased expiration period means increased possibility of larger movement in the price of the underlying. Long-term options are proposed to be made available with expiration dates up to 5 years. These long-term options could be purchased not only for individual stocks, but also for equity indexes. Longer term options offer a good alternative to a longer-term trader to gain exposure to a prolonged period in a given security without having to roll several short-term contracts. Investors also use long-term calls to diversify their portfolios. Long-term puts provide investors with a means to hedge current stock holdings. Many of the features of long-term options are the same for short-term options. However, they differ from short-term options in several ways including availability, pricing, time erosion versus delta effect and strategies. During the interactions with various market participants it was brought out that existing options contracts traded on Indian stock exchanges have a maximum life/tenure of 3 months, and there is a need to have options contracts with longer life/tenure. It is expected that these longer term options contracts will provide liquidity across the tenures in the market.
- **Options on Futures:** Options on futures are derivative products here on exercise the options position is converted into a futures position instead of delivery of the underlying. A put is the option to sell a futures contract, and a call is the option to buy a futures contract. For both, the option strike price is the specified futures price at which the futures contract is acquired if the option is exercised. Options on futures are generally of American style. In other markets, Options on futures are available on various underlying such as energy, interest rate, commodities, currency and so on. Options on futures contracts offer a wide and diverse range of investment opportunities. This will also provide one additional tool for risk management for the investors. Options on futures are the derivative instrument that will be added to the existing set of products. Introduction of options of

futures on underlying such as interest rates which are currently not active in the derivative segment is expected to provide liquidity in the interest rate futures segment also.

- **Bond Index and F&O contracts:** At present, there is little activity in corporate bond market segment and in interest rate derivatives. It is proposed that bond indexes (both corporate and GoI) to be created and F&O on the same could be introduced on the lines of what has been permitted inequity. Further, possibility of introduction of exchange-traded single bond futures and exchange-traded credit derivatives could also be explored.
- **Exchange-traded Currency (Foreign Exchange) F&O Contracts:** It is expected that trading of F&O segment on organized exchanges will help in concentrating order flow and provide a transparent venue for price discovery. The role of clearing corporation/house means minimal margin requirements and the low transactions costs, further mitigation of credit risks by daily marking to market of all futures positions and general lowering of transaction costs for participants are relatively low. A smaller contract size will also help small and medium enterprises in hedging their exposure directly on an exchange. This will also help banks to improve their risk management in relation to positions taken in the over-the-counter (OTC) forward Forex market. With the possibility of capital account convertibility at some time in future, it is felt that an enabling framework in this segment could also be put in place. Further, supervision of Forex F&O trading activities, prescription of risk containment and market integrity measures could be managed by appropriate authority. It is also felt that these contracts could possibly be traded on existing exchanges.

11. The Interest Rate Futures contract on 10-year notional coupon bearing GOI (Government of India) security was introduced on 31 August, 2009.
12. Technical Advisory Committee (TAC) on the money, foreign exchange and government securities markets proposed to introduce interest rate futures on 5-year and 2-year notional coupon bearing securities and 91-day treasury bills.
13. In 2007, the Reserve Bank had issued draft guidelines for introduction of credit default swaps (CDS) in India enabling the investors to transfer/hedge their credit risk.
14. In India, centralised reporting of OTC trades in interest rate derivatives [interest rate swap (IRS)/ forward rate agreements (FRAs)] commenced in August 2007 on the reporting platform of Clearing Corporation of India Limited (CCIL).
15. The currency futures are operational in USD–INR since August 2008. Three more currency pairs, *viz.*, Euro–INR, Japanese Yen–INR and Pound Sterling–INR were introduced in the currency futures market during 2009–2010 to provide more avenues to hedge the currency exposure of Indian residents.
16. In order to provide participants with additional instruments to manage volatility in the short-term interest rates, IRFs on 91-day Treasury Bills were permitted since March 2011.
17. In May 2011, CDS on corporate bond was operationalised and final guidelines were issued in this regard.
18. The comprehensive guidelines on OTC foreign exchange derivatives and overseas hedging of commodity price and freight risks were issued in December 2010. The important elements are (i) AD category banks can only offer plain vanilla European cross-currency options; (ii) allowing embedded cross-currency option in the case of foreign currency–rupee swaps; (iii) permitting use of cost reduction structures, both under the contracted exposures and past performance routes, subject to

certain safeguards and (iv) allowing swaps to move from rupee liability to FOREX liability, subject to certain safeguards.

19. The guidelines on 91-day T-bill IRFs were issued on 7 March 2011. Further, the guidelines for cash-settled 2-year and 5-year IRFs were issued on 30 December 2011.
20. In December 2011, a trade repository—CCIL online reporting engine (CORE)—has been set up for reporting CDS trades. Value-free transfer of securities has also been permitted to meet margin requirements.
21. To improve tradability and facilitate centralised clearing and settlement of IRS contracts in future, IRS contracts have been standardised**.** The standardisation of IRS contracts has been achieved in terms of minimum notional principal amount, tenors, trading hours, settlement calculations and so on.
22. The working group on enhancing liquidity in the G-sec and IRD markets examined IRF markets in detail and recommended introducing cash settled 10-year IRFs. BSE, NSE and the Multi Commodity Exchange introduced cash-settled IRF on 10-year G-secs in January 2014.

20.7 MARKET DESIGN FOR FINANCIAL DERIVATIVES TRADING IN INDIA

LO 4

Illustrate the market design for financial derivatives trading in India

Broadly three types of financial derivatives such as *equity linked derivatives*, *currency derivatives* and *interest rate derivatives* are traded in the Indian market. The major financial derivative instruments which are traded in Indian market are (i) index futures, (ii) index options, (iii) stock futures, (iv) stock options, (v) interest rate futures, and (vi) rupee currency. Derivatives trading in India began in 2000 when both the NSE as well as the BSE commenced trading in equity derivatives. In June 2000, index futures became the first type of derivative instrument to be launched in the Indian markets, followed by index options in June 2001, options in individual stocks in July 2001 and futures on single stocks derivatives in November 2001. Since then, equity derivatives have come a long way. Equity derivatives trading at present is done through the existing exchanges namely BSE, NSE and ICSE. Apart from IFs and IOs, individual stock futures and individual stock options were also introduced on BSE and NSE on 9 November, 2001, and they appear to be more attractive to the traders. The currency derivatives segment at the NSE commenced operations on 29 August, 2008 with the launch of currency futures trading in US Dollar–India Rupee (USD–INR). Other currency pairs such as Euro–INR, Pound Sterling–INR, and Japanese Yen–INR were made available for trading on 1 February, 2010. In the segment, interest rate futures were introduced on 31 August, 2009. Currency options trading in USD–INR was started on 29 October, 2010. The NSE has introduced derivatives on global indices such as S&P 500, Dow Jones Industrial Average (DJIA) and FTSE 100. The futures contracts for trading on DJIA, and the futures and options contract on S&P 500 were introduced on 29 August, 2011. The futures and options contracts on FTSE 100 were introduced on 3 May, 2012. The market design for these three types of derivatives is explained below:

(i) **Trading Mechanism:** The Futures and Options (F&O) trading system of NSE is called NEAT-F&O trading system. It provides fully automated, screen-based trading for index futures and options and stocks futures and options on a nation-wide basis as well as an online monitoring and surveillance

mechanism. It supports an order-driven market and provides complete transparency of trading operations.

(ii) **Clearing and Settlement:** The National Securities Clearing Corporation Limited (NSCCL) undertakes the clearing and settlement of all trades executed on the futures and options (F&O) segment of NSE. Index as well as stock options and futures are cash settled (i.e. through exchange of cash).

(iii) **Eligibility criteria for Stocks for F&O trading:** (i) The stock is chosen from among the top 500 stocks in terms of average daily market capitalisation and average daily-traded value in the previous 6 months on a rolling basis. (ii) The stock's median quarter-sigma order size over last 6 months should be not less than ₹10 lakh. For this purpose, a stock's quarter-sigma order size (in value terms) is required to cause a change in the stock price equal to one-quarter of a standard deviation. (iii) The market-wide position limit in the stock should not be less than ₹300 crore. The market-wide position limit (number of trades) is valued taking the closing prices of stocks in the underlying cash market on the date of expiry of the contract in the month. The market-wide position limit of open position (in terms of the number of underlying stock) on futures and options contracts on a particular underlying stock shall be 20 percent of the number of shares held by non-promoters in the relevant underlying security (iv) For an existing F&O stock, the continued eligibility criteria is that the market-wide position limit in the stock shall not be less than ₹200 crore and stock's median quarter-sigma order size over last 6 months shall be not less than ₹5 lakh. (v) The stock's average monthly turnover in the derivative segment over last 3 months should not be less than ₹100 crore.

(iv) **Eligibility Criteria for Indices for F&O Trading:** The exchange may consider introducing derivative contracts on an index if the stocks contributing to 80 percent weightage of the index are individually eligible for derivative trading. However, no single ineligible stocks in the index should have a weightage of more than 5 percent of the index. This criterion is applied for every month. If the index fails to meet the eligibility criteria for 3 months consecutively, then no fresh contract would be issued on that index.

20.8 CONTRACTS SPECIFICATIONS[2]

Table 20.2 Contract specifications for equity derivatives

Equity Derivatives							
Parameter	Index futures	Index options	Futures on individual securities	Options on individual securities	Mini index futures	Mini index options	Long-term index options
Underlying	CNX Nifty CNX IT Bank Nifty Nifty Midcap 50 CNX PSE CNX Infra		135 Securities		CNX Nifty	CNX Nifty	CNX Nifty

(*Contd.*)

[2]Indian Securities Market—A Review, ISMR-2013, 2012.

Security Descriptor							
Instruments	FUTIDX	OPTIDX	FUTSTK	OPTSTK	FUTIDX	OPTIDX	OPTIDX
Option type	-	Call European(CE)/ put European (PE)	-	CE/PE	-	CE/PE	CE/PE
Trading cycle	Three-months trading cycle-the near month(1), the next month(2), and the far month (3)						Three quarterly expiries (March, June, September, and December cycle)
Expiry day	Last Thursday of the expiry month. If the last Thursday is a trading holiday, then the expiry is the previous trading day.						
Strike price intervals	—	Depending on underlying price	—	Depending on underlying volatility	—	Depending on underlying price	Depending on underlying price
Permitted lot size	Underlying specific	Underlying specific	Underlying specific	Underlying specific	20	20	Underlying specific
Price steps	₹0.05	₹0.05	₹0.05	₹0.05	₹0.05	₹0.05	₹0.05
Price bands	Operating range of 10% of the base price	A contract specific price range based on its delta value is computed and updated on daily basis	Operating range of 10% of the base price	A contract-specific price range based on its delta value computed and updated on daily basis	Operating range of 10% of the base price	A contract-specific price range based on its delta value computed and updated on daily basis	A contract-specific price range based on its delta value computed and updated on a daily basis.

Table 20.3 Contract specification for S&P 500 futures and options

	Futures	*Options*
Ticker symbol	S&P 500	
Contract size	250 units	
Notional value	Contract size multiplied by the index level (for instance, if the current index value is 1000, then the notional value would be 1000 × 25 = ₹250,000)	—
Tick size	0.25	0.25
Trading hours	As in the equity derivative segment	
Expiry date	Third Friday of the respective contract month. In case the third Friday is a holiday in the United States or in India, the contract shall expire on the preceding business day.	
Option type	—	The options contracts is European-styled, which can be exercised only on the expiration date.
Daily settlement price	Last half hour's weighted average price	Daily premium settlement

(*Contd.*)

Final settlement price	All open positions at close of last day of the trading shall be settled to the special opening quotation (SOQ) of the S&P 5000 index on the date of expiry.	
Final settlement procedure	Final settlement will be cash settled in INR based on final settlement price	Final settlement will be cash settled in INR based on final settlement price. Long positions of in-the-money contracts shall be assigned to open short positions in option contracts.
Final settlement day	All open positions on expiry date shall be settled on the next working day of the expiry date ($T + 1$)	
Position limits	The trading member/mutual funds position limits and the disclosure requirements for clients are the same as those applicable in the case of domestic stock index derivatives.	

Table 20.4 Contract specifications for currency options

Symbol	*USD–INR*
Market type	Normal
Option type	Premium-style European call and put options
Premium	Premium quoted in Indian Rupees
Unit of trading	One contract unit denotes USD 1000
Underlying/order quotation	The exchange rate in Indian Rupees for RS Dollars
Tick size	0.25 paise (i.e. ₹0.0025)
Trading hours	Monday to Friday, 9.00 a.m. to 5.00 p.m.
Contract trading cycle	Three serial monthly contracts followed by one quarterly contract of the cycle March-June-September-December
Strike price	12 in-the-money, 12 out-of-the-money, and 1 near-the money (25 CE and 25 PE)
Strike price intervals	₹0.25
Price operating range	A contract-specific price range on its delta value is computed and updated on a daily basis
Quantity freeze	10,001 or greater
Base price	Theoretical price on the first day of the contract; on all other days, DSP (daily settlement price) of the contract
Expiry/last trading day	Two working days prior to the last business day of the expiry month at 12 noon
Exercise at expiry	All in-the-money open long contracts shall be automatically exercised at the final settlement price and assigned in a random basis to the open short positions of the same strike and series.
Final settlement day	Last working day (excluding Saturdays) of the expiry month. The last working day will be the same as that for interbank settlements in Mumbai.
Position limits	The gross open position across all contracts (both futures and options) shall not exceed the following: Client: Lower of 6% of total open interest or USD 10 million Trading Members: Higher 15% of the total open interest or USD 50 million Banks: Lower 15% of the total open interest or USD 100 million
Initial margin	SPAN-based margin
Extreme loss margin	1.5% of the notional value of open short position
Settlement premium	Premium to be paid by the buyer in cash on T+1 day
Settlement	Daily settlement: T+1 Final settlement: T+2
Mode of settlement	Cash settled in Indian Rupees
Final settlement price (FSP)	RBI reference rate on the date of expiry of the contract

Table 20.5 Contract specification for interest rate futures (10-year notional coupon-bearing GOI security, 7 percent annual compounding)

Symbol	*10YGS7*
Market type	Normal
Instrument type	FUTIRD
Unit of trading	One lot (1 lot equal to notional bonds of face value ₹2 lakh)
Underlying	10-year notion coupon-bearing Government of India (GOI) security (notional coupon: 7% with semi-annual compounding)
Tick size	₹0.0025
Trading hours	Monday to Friday, 9:00 a.m. to 5:00 p.m.
Contract trading cycle	Two fixed quarterly contracts for the entire year (ending March, June, September, and December)
Last trading day	Two business days prior to the last working day of the delivery/expiry month.
Quantity freeze	1251 lots or greater
Base price	Theoretical price of the first day of the contract; on all other days, DSP of the contract
Price operating range	±5% of the base price
Position limits	Clients: 6% of the total open interest or ₹300 crore, whichever is higher Trading Members: 15% of the total open interest or ₹1000 crore, whichever is higher.
Initial margin	SPAN-based margin
Extreme loss margin	0.3% of the value of the gross open positions of the futures contract
Settlement	Daily settlement MTM: T + 1 in cash Delivery settlement: Last business day of the expiry month.
Daily settlement price	Closing price or theoretical price
Delivery settlement	
Mode of settlement	Daily settlement in cash
Deliverable grade securities	GOI securities
Conversion factor	The conversion factor would be equal to the price of the deliverable security (Per Indian Rupee of principal) on the first calendar day of the delivery month, to yield 7% with semi-annual compounding.
Invoice price	Daily settlement price times a conversion factor + accrued interest
Delivery day	Last business day of the expiry month
Intent to deliver	Two business days prior to the delivery settlement day.

20.9 DEVELOPMENT OF FINANCIAL DERIVATIVES MARKET

LO 5
Explain the financial derivatives market

Futures and Options (F&O) trading in commodities appears to have originated sometime in the seventeenth century. Trading in financial futures began abroad in the early 1970s after almost a decade of accelerating inflation which exposed market participants to the unprecedented levels of exchange and interest rates risks. Foreign currency futures and interest rates futures were introduced in 1972 and 1975, respectively. The significant growth of the formal, organised and officially recognised derivatives markets even abroad has taken place only during the past 4 decades. At the global level, Table 20.6 shows that the total value

Table 20.6 Growth of derivatives in global financial markets (billion US dollars)

Derivatives types	*1986*	*1998*	*2002*	*2007*	*2008*	*2009*	*2010*	*2011*	*2012*	*2013*
1. Exchange traded instruments (Total)	618 (55.28)	13932 (23.05)	23810 (19.64)	80623 (18.66)	57744.3 (12.11)	73156.5 (14.79)	69245.1 (13.54)	30775.3 (5.97)	54055.9 (10.68)	64099.9 (1.36)
(i) Interest rate futures	370 (59.87)	8020 (57.56)	9951 (41.79)	26787 (33.22)	18732.3 (32.44)	20627.7 (28.20)	22312 (32.22)	22924.4 (74.49)	22620.6 (41.58)	24165.1 (37.70)
(ii) Interest rate options	146 (23.62)	4623 (33.18)	11759 (49.39)	44308 (54.95)	33978.8 (58.84)	46428.7 (63.46)	40930 (59.11)	3159.6 (10.27)	25909.7 (47.93)	32786.2 (51.15)
(iii) Currency futures	10 (1.62)	32 (0.23)	47 (0.19)	159 (0.19)	124.3 (0.22)	181.1 (0.25)	170.2 (0.25)	221.2 (0.72)	230.3 (0.43)	243.9 (0.38)
(iv) Currency options	39 (6.31)	49 (0.35)	26 (0.11)	133 (0.16)	129.3 (0.22)	147.3 (0.20)	144.2 (0.21)	87.2 (0.28)	105.3 (0.19)	142.6 (0.22)
(v) Equity index futures	14 ((2.27)	291 (2.09)	325 (1.36)	1134 (1.41)	650.5 (1.13)	964.9 (1.32)	1128.4 (1.63)	984 (3.20)	1249.4 (2.31)	1380.7 (2.15)
(vi) Equity index options	38 (6.15)	917 (6.58)	1700 (7.14)	8103 (10.51)	4129.1 (7.15)	4806.8 (6.57)	4560.3 (6.59)	3398.9 (11.04)	3940.6 (7.29)	5381.4 (8.40)
2. 2. OTC instrument (total)	500 (44.72)	46512 (76.95)	97416 (80.36)	351250 (81.37)	419238 (87.89)	421619 (85.21)	441979 (86.46)	484556 (94.03)	452205 (89.32)	4646411 (98.64)
(i) Interest rate swaps	400 (80.00)	36262 (77.96)	79161 (81.62)	271853 (77.39)	341148 (81.37)	349288 (82.44)	364377 (82.44)	402611 (83.09)	369999 (81.82)	4566725 (98.28)
(ii) Currency swaps	100 (20.00)	2253 (4.84)	4509 (4.63)	12291 (3.49)	14941 (3.56)	16509 (3.92)	19271 (4.36)	22791 (4.70)	25420 (5.62)	25448 (0.55)
(iii) Other swap-related derivatives	—	7997 (17.19)	13746 (14.11)	67106 (19.11)	63149 (15.06)	55822 (13.24)	58331 (13.20)	59154 (12.21)	56786 (12.56)	54238 (1.17)
3. Grand Total	1118	60444	121226	431873	476982.3	494775.5	511224.1	515331.3	506260.9	4710511

Notes: Figures in brackets are percentages to respective totals. Other swap-related derivatives includes credit default swap, swaptions, forex swaps and so on.

Sources: Quarterly reviews of Bank for International Settlement.

of derivatives trading has increased phenomenally from just $1118–$4,710,511 billion, that is, by 4214 percent during 1986–2013. As a part of this total, the share of OTC-traded (OTCT) derivatives has increased over the years. It was 44 percent in 1986 and 98 percent in 2013, the remaining share being accounted for by the exchange-traded (ET) derivatives. Among the latter, interest rates futures and interest rates options accounted for 37–60 percent and 24–60 percent, respectively, during 1986–2013. Over the years, while the share of interest rate futures has declined that of interest rate options has increased. In contradistinction, the stock market index futures and options accounted for only 2–3 percent and 3–6 percent, respectively, during the same period. The currency futures and options also have accounted for a very small part of the world derivatives markets. At present, the most important type of derivative is the OTCT interest rate swaps. In terms of their relative shares in the value of trading, the descending order of importance of different types of derivatives in the recent past has been as follows: OTCT interest rate swaps, interest rate futures, interest rate options, OTCT currency swaps and other swap-related derivatives, stock index options, stock index futures, currency options and currency.

Table 20.7 shows the size of derivatives market in India, the growth in this market and the instruments-wise and exchange-wise structure of this market. Although derivatives were introduced simultaneously on the BSE and NSE, during the period 2000–2001 to 2011–2012 there was hardly any derivatives market as a part of BSE; more than 99 percent of the volume of turnover was accounted for by the NSE. In the year 2012–2013 the BSE has contributed 18.51 percent of total derivatives trading. Further the share of BSE has increased to 26.8 percent in the year 2014–2015. Unlike in other countries, index futures, stock futures and index options are the major derivatives in India at present. These three types of derivatives instrument accounted for more than 95 percent of total turnover in the equity derivative segment of the derivatives market in India. All derivative contracts are currently cash settled. The detail of the settlement statistics in the F&O segment is presented in Table 20.8. During 2014–2015, the total cash settlement of futures and of options accounted for around ₹132,922 crore, which has increased from ₹14,818 crore in the year 2004–2005.

Table 20.7 Turnover in equity derivatives market in India (in percentage and ₹ in crore)

Year	*Index futures*		*Stock futures*		*Index options*		*Stock options*		*Total (turnover)*	
	BSE	*NSE*	*BSE*	*NSE*	*BSE*	*NSE*	*BSE*	*NSE*	*BSE*	*NSE*
2001–2002	1.23	20.69	0.44	49.61	0.08	3.63	0.11	24.23	1926 (1.85)	101925 (98.15)
2002–2003	0.41	9.94	0.15	64.78	0.00	2.09	0.00	22.64	2478 (0.56)	439866 (99.44)
2003–2004	0.31	25.88	0.24	60.95	0.00	2.47	0.02	10.14	12074 (0.56)	2130447 (99.44)
2004–2005	0.53	30.13	0.01	57.90	0.09	4.76	0.00	6.59	16112 (0.63)	2547053 (99.37)
2005–2006	0.00	31.38	0.00	57.87	0.00	7.02	0.00	3.74	9 (0.00)	4824251 (100)
2006–2007	0.75	34.25	0.05	51.66	0.00	10.68	0.00	2.61	59006 (0.80)	7356270 (99.20)
2007–2008	1.76	28.66	0.06	56.62	0.00	10.22	0.00	2.69	242308 (1.82)	13090477 (98.18)

(*Contd.*)

2008–2009	0.11	32.39	0.00	31.57	0.00	33.85	0.00	2.08	11775 (0.11)	11010482 (99.89)
2009–2010	0.00	22.27	0.00	29.41	0.00	45.45	0.00	2.86	234 (0.00)	17663665 (100)
2010–2011	0.00	14.90	0.00	18.79	0.00	62.79	0.00	3.52	154 (0.00)	29248221 (100)
2011–2012	0.55	11.13	0.03	12.67	1.92	70.65	0.00	3.04	808476 (2.51)	31349732 (97.49)
2012–2013	0.32	6.53	0.01	10.92	18.16	58.87	0.03	5.17	7163519 (18.51)	31533004 (81.49)
2013–2014	0.13	6.50	0.11	10.43	19.09	58.54	0.10	5.08	9219434 (19.44)	38211408 (80.56)
2014–2015	0.06	5.41	0.01	10.91	26.50	52.55	0.23	4.32	20362741 (26.80)	55606443 (73.20)

Source: SEBI Handbook of Statistics in Indian Security Market, 2015, 2013, 2010, 2008.
Note: Notional Turnover = (Strike Price + Premium) × Quantity. And the turnover value (total) of BSE and NSE are reported in crores.

Table 20.8 Settlement statistics in F & O segment (₹ in crore)

Year	*BSE*	*NSE*	*Total*
2004–2005	169 (1.15)	14649 (98.85)	14818
2005–2006	0 (0.00)	28522 (100)	28522
2006–2007	0 (0.00)	66494 (100)	66494
2007–2008	431 (0.27)	156519 (99.73)	156950
2008–2009	113 (0.12)	91840 (99.88)	91953
2009–2010	0 (0.00)	76943 (100)	76943
2010–2011	1 (0.001)	83701 (99.99)	83702
2011–2012	192 (0.27)	72296 (99.74)	72488
2012–2013	32596 (36.47)	56759 (63.53)	89355
2013–2014	17960 (23.29)	59131 (76.71)	77091
2014–2015	37268 (28.03)	95654 (71.97)	132922

Source: SEBI Handbook of Statistics, 2015.
Note: Values in the parenthesis are in percentage to total.

The interest rate and currency derivatives market in India have not grown in the same pace with equity derivative segment. In terms of trading value, NSE has dominated both the segments. For interest rate derivatives, it has accounted for more than 90 percent and for currency derivatives also it was more than 90 percent up to 2013–2014 and in the year 2014–2015 the share of BSE has increased to 38.7 percent (Tables 20.9 and 20.10).

Table 20.9 Trends/business growth in interest rate derivative segment

Year	*NSE trading value (₹ crore)*	*BSE trading value (₹ crore)*	*Total trading value (₹ crore)*
2003–2004	20.3 (100)	—	20.3
2010–2011	62 (100)	—	62
2011–2012	3959 (100)	—	3959
2012–2013	0.22 (100)	—	0.22
2013–2014	30172 (92.13)	2579 (7.87)	32751
2014–2015	421559 (90.96)	41912 (9.04)	463471

Source: SEBI Handbook of Statistics, 2015, 2005.

Note: (1) Interest rate futures trading started in April 2003. (2) NSE re-introduced interest rate futures contracts on 10 year G-Sec w.e.f. 31 August, 2009. (3) NSE re-introduced interest rate futures contracts on 91-day GOI T-Bill wef 4 July 2011. (4) IRF on 91-day GoI T-bill started at NSE on 4 July, 2011. (5) Trading at BSE started in November 13 while it started in January 14.

Table 20.10 Trends/business growth in currency derivative segment

Year	*NSE (turnover in crore)*			*BSE (turnover in crores)*			*Grand total*
	Currency futures	*Currency options*	*Total*	*Currency futures*	*Currency options*	*Total*	
2008–2009	162272	—	162272 (100)	—	—	—	162272
2009–2010	1782608	—	1782608 (100)	—	—	—	1782608
2010–2011	3279002	170786	3449788 (100)	—	—	—	3449788
2011–2012	3378489	1296501	4674990 (100)	—	—	—	4674990
2012–2013	3765105	1509359	5274465 (100)	—	—	—	5274465

(*Contd.*)

2013–2014	2940886	1071628	4045009 (94.26)	211816	32496	244312 (5.74)	4256825
2014–2015	2247992	775915	3625374 (61.30)	1307077	601466	1908543 (38.70)	4932451

Source: SEBI Handbook of Statistics, 2015; Currency derivative segment of BSE official website.
Note: (1) The currency future was introduced on 29 August, 2008 at NSE. (2) The currency option was introduced on 29 October, 2010 at NSE. (3) Trading on currency derivative ton BSE was launched on Thursday, 28 November, 2013. For the year 2013–2014, we have considered data span from 29 November 2013 to 31 March, 2014.

20.10 DEVELOPMENT OF COMMODITY DERIVATIVES MARKET IN INDIA

LO 6
Discuss the development of commodity derivatives market in India

A well-developed and effective commodity futures market, unlike physical market, facilitates offsetting the transactions without impacting on physical goods until the expiry of a contract. Futures market attracts hedgers who minimize their risks, and encourages competition from other traders who possess market information and price judgment. While hedgers have long-term perspective of the market, the traders, or arbitragers as they are often called, hold an immediate view of the market. A large number of different market players participate in buying and selling activities in the market based on diverse domestic and global information, such as price, demand and supply, climatic conditions and other market-related information. All these factors put together result in efficient price discovery as a result of large number of buyers and sellers transacting in the futures market. Futures market, as observed from the cross-country experience of active commodity futures markets, helps in efficient price discovery of the respective commodities and does not impair the long-run equilibrium price of commodities. At times, however, price behaviour of a commodity in the futures market might show some aberrations reacting to the element of speculation and 'bandwagon effect' inherent in any market, but it quickly reverts to long-run equilibrium price, as information flows in, reflecting fundamentals of the respective commodity. In futures market, speculators play a role in providing liquidity to the markets and may sometimes benefits from price movements, but do not have a systematic causal influence on prices. An effective architecture for regulation of trading and for ensuring transparency as well as timely flow of information to the market participants would enhance the utility of commodity exchanges in efficient price discovery and minimise price shocks triggered by unanticipated supply demand mismatches.

Commodity futures trading in India remained in a state of hibernation for nearly 4 decades, mainly due to doubts about the benefits of derivatives. Finally, a realisation that derivatives do perform a role in risk management led the government to change its stance. The policy changes favouring commodity derivatives were also facilitated by the enhanced role assigned to free market forces under the new liberalisation policy of the government. Indeed, it was a timely decision too, since internationally the commodity cycle is on the upswing and the next decade is being touted as the decade of commodities. A three-pronged strategy was adopted to develop the commodity derivative markets in India. First, major legal, regulatory and policy-impediments

for development of commodity derivative markets have been largely removed. For instance, restrictions on long-term party-to-party merchandising contracts were removed. The liberal and developmental approach of the government towards the policies relating to commodity derivatives was announced unambiguously in the National Agricultural Policy (2000) and in 2001–2002, budget speech of the Finance Minister. In pursuance of this approach, the prohibition on derivative trading in all the commodities has been withdrawn. Second, with a view to upgrading the existing exchanges, best international systems and practices in respect of brokerages, trading, clearing, settlements, market monitoring and surveillance regulation were studied through experts in the field. Awareness about these systems and practices was widely disseminated through workshops, seminars and training programmes and by organizing visits for the exchange office-bearers, traders and regulator to the developed markets abroad. Third, an initiative was taken to create competition, encourage the exchanges to trade multiple products and to establish new modern multi-commodity exchanges, which would follow the best international practices and systems. Most of the regulatory powers in respect of the commodity derivative markets are with the central government, and the Forward Markets Commission exercises the delegated powers or plays a recommendatory role. Since 25 September, 2015, the regulatory power of the commodity exchanges has been merged with SEBI. The rationale for convergence hinges upon its capacity to ensure growth, liquidity and safety of the market as well as to improve accessibility to the public by spreading the network and reducing the transaction costs.

The following section highlights about the development in the commodity derivatives market in India.

Table 20.11 Turnover of commodity derivatives in various exchanges (₹ in crore)

Year	*MCX*	*NCDEX*	*NMCE*	*Others*	*Total*
2003–2004	2456 (1.9)	1490 (1.15)	23842 (18.43)	101576 (78.52)	129364
2004–2005	165147 (28.88)	266338 (46.58)	13988 (2.45)	126286 (22.09)	571759
2005–2006	961633 (44.62)	1066686 (49.5)	18385 (0.85)	108418 (5.03)	2155122
2010–2011	9841502 (85.76)	1410602 (12.29)	218411 (1.9)	5643 (0.05)	11476158
2011–2012	15591095 (88.21)	1810204 (10.24)	268351 (1.52)	5221 (0.03)	17680871
2012–2013	14881057 (89.30)	1598426 (9.59)	177134 (1.06)	7697 (0.05)	16664314
2013–2014	8611449 (88.76)	1146328 (11.55)	152819 (1.54)	15174 (0.15)	9925770
2014–2015	5183707 (84.49)	904063 (14.73)	36040 (0.59)	11684 (0.19)	6135494

Source: SEBI Handbook of statistics, 2015

Table 20.12 Product Segment-wise percentage share in turnover at commodity exchanges

Year	MCX				NCDEX				NMCE		
	Agl.	Metals	Bullion	Energy	Agl.	Metals	Bullion	Energy	Agl.	Metals	Bullion
2010–2011	1.2	25.5	52.5	20.8	78.7	2.6	5.0	13.7	59.0	33.0	8.0
2011–2012	1.3	17.4	63.9	17.5	91.9	1.7	1.6	4.8	50.0	41.0	9.0
2012–2013	1.8	21.1	52.5	24.6	97.4	0.5	0.1	2.0	60.0	36.0	3.0
2013–2014	2.0	20.0	49.5	28.5	99.3	0.0	0.5	0.1	87.0	9.0	4.0
2014–2015	2.1	24.6	41.5	31.7	96.3	0.0	3.6	0.1	100.0	0.0	0.0

Source: SEBI Handbook of statistics, 2015

The major commodities traded in various commodity exchanges include agricultural products, bullion, metals other than bullion and energy. In the initial years, the share in turnover of commodity derivatives was mostly dominated by the regional stock exchanges such as Rajkot Commodity Exchange Ltd. and Chamber of Commerce, Hapur. Gradually, over the period the share of national commodity exchanges such as MCX, NCDEX and NMCE has increased. During 2004–2006, the share of NCDEX was the highest followed by MCX. But since 2010–2011, the share in the turnover of MCX has increased to 85 percent, and it varies from 85–89 percent during the period 2010–2011 to 2014–2015 (Table 20.11). This implies that the importance of MCX has increased by manifolds. In MCX, the percentage share in turnover of bullion has been the highest throughout the period, but it has been observed that the share of bullion has been declining continuously during 2011–2012 to 2014–2015 and the share of energy has been increasing. Both in NCDEX and NMCE, the share in turnover of agricultural products has been the highest throughout the period and it has been close to 100 percent during the recent year (Table 20.12).

20.11 CRITIQUE OF DERIVATIVES

We have described earlier many services which the financial derivatives are said to provide. Many people feel that they meet the market need and can be handled safely in spite of their complexity. But there are other people who have warned against them because of their contribution to destabilisation, volatility, financial excesses, bouts of trauma and oscillations in financial markets. They are exotic instruments which add to the waste on these markets. They do not help to create real wealth, although they enable financial institutions and speculators to earn lots of money. Derivatives are overkill; they do more harm than good. This section critically examines the general case for derivatives so as to help readers to develop a correct perspective on derivatives.[3]

20.11.1 Speculative Nature

There are reasons and evidence to believe that the economic and social utility of derivatives has been blown up out of proportion by imagining that their theoretical advantages and services are really essential, and that they can be genuinely experienced in actual, practical life. The fact that the trading volume in derivatives

[3]For this and the next section, see also Bhole, L M, 'Futures, Options, and Other Financial Innovations in India', *Productivity*, July–September 1994.

is always in many multiples of the value of underlying assets and that hardly 1 or 2 percent of the futures contracts are settled by the actual delivery of assets clearly signify that the overwhelming motivation behind derivatives trading is to satisfy speculative and gambling propensities or urges in some people. Speculation has been the primary purpose of the birth, existence and growth of derivatives. Most of the derivatives are not suitable for acquiring desired supplies of assets, and they are not actually used for such a purpose. The existence of derivatives facilitates the generation of waves of speculative buying and selling by professionals and amateurs, which adversely affect the fortunes of those who are engaged in genuine production and distribution.

But is it not true that speculation has many economic uses? It has been argued that speculation brings about a better allocation of supplies over time; that it reduces fluctuations in prices; that it balances supply and demand and avoids periodic gluts and shortages; and that it increases the efficiency of markets. Unfortunately, such arguments assume that all speculation is 'constructive speculation', while in practice, most of it is 'professional speculation' or 'movement trading' which is highly destabilising. There are no reasons why speculative supply and demand themselves would not add to the imbalance between genuine supply and demand, to gluts and shortages, to sudden jerks and jolts and to price fluctuations. In fact, speculation does cause all these in practice. The economic theory erroneously assumes that while all the non-speculators consistently take a uniform view that prices will either rise or fall in future, all the speculators take a uniform but the opposite view of the market. It also wrongly assumes that the speculators are more knowledgeable, better informed and foresighted people, while in practice, they have been found to be mostly the market manipulators and gamblers. The actual experience in India as well as abroad amply shows that the sudden and sharp gyrations in market prices rather than their stabilisation have been the common, frequent and widespread consequences of speculation. This can, after all, be the only logical outcome of the speculators' desire to get rich in the shortest possible time.

20.11.2 Increase in Risk

The case for derivatives for efficient risk management is also one-sided, unconvincing and overplayed. Being extremely speculative, derivatives themselves, particularly customised, privately negotiated, OTC-traded ones, are highly risky, which is reflected well in the proliferation of an unending stream of composite, compound, joint, hybrid and synthetic derivatives. Studies have shown that the use of derivatives by, say, banks may not increase the total risk faced by them if appropriate and effective regulatory framework is created, but it would certainly not result in the reduction in risk, and that there would be an emergence of certain new types of risk, the management of which may be more intractable. Derivatives expose their users to new financial risks, and the financial system to greater regulatory costs. They are powerful leveraged mechanisms used to create risk. Similarly, if derivatives are for risk management, how come treasury bonds, a riskless security, are the major security used for trading interest rate futures?

20.11.3 Instability of the Financial System

Derivatives increase risk not only for their users but also for the whole system. The fears of micro and macro financial crises have ballooned with the growth of derivatives. The term financial derivatives has acquired

a pejorative sense because the wild market swings have turned many market players into big losers; the instances of managerial blindness, desperate behaviour and outright frauds have multiplied in derivatives markets. There are certain features of these markets which tend to increase their threat to the stability of the financial system, for example, the concentration in them. It is reported that only about 150 firms were acting as derivatives dealers worldwide in 1992. Further, these markets have come to be linked up with the other segments of financial markets, which means that the shocks originating in them can spread to those segments destabilising the whole system. It has been rightly pointed out by some that we should not take a complacent view regarding the increased fragility of the financial system on account of derivatives. In the past, if the failure of certain participants did not lead to systemic instability and failure, it was because the firms involved were perhaps small, and the regulators could intervene effectively and in time. However, there is a widespread fear that the liquidity crisis in one market can quickly spread and become a massive crisis because many operators simultaneously tap the same markets.

In this context, the following five important threats which the derivatives pose to the health of financial system have been highlighted as follows:

(i) The initial high profitability in derivatives markets can attract many participants which can create excess capacity, which, in turn, can force many operators to move to the 'marginal edge of risk taking'. Thus, derivatives raise the level of risk and create micro-prudential concerns for the authorities.

(ii) They increase an exposure to credit risk also. The adequate credit evaluation is not always possible while dealing with new types of organisations. There is likely to be an erosion of credit standards as competition in the market place increases.

(iii) The market risk in financial derivatives cannot be always managed; it may not be feasible to cover the open position before it goes hopelessly wrong. This can lead to market disruption. Whenever there is the slightest chance of trading halts, or of the abandonment of market-making by the leading dealers, normal market access shrinks. The volatility can balloon by orders of magnitudes defeating even the best-planned hedging strategy.

(iv) Hedging strategies on statistical models which rely on past behavioural patterns are not good enough because the structural changes in financial markets can cause significant deviations from the past relationships. Therefore, derivatives cannot really help to reduce risk through hedging.

(v) Derivatives do not reduce the risk for the economy as a whole; they merely shift it from one participant to another. This reallocation of risk does not materially lessen the danger of disorderly trading in the event of an unforeseen shock.

20.11.4 Price Instability

The claim about the contribution of derivatives to price stability is also highly suspect. They, in fact, often cause wild fluctuations in assets prices by disrupting the markets for those assets. They widen the range of fluctuations in the prices of hedge contracts beyond what is warranted by the demand and supply conditions. They may help in price stabilisation in the properly organised, competitive and well-regulated markets. But if the market possesses these characteristics, derivatives are redundant for price stabilisation.

20.11.5 Displacement Effect

The expansion of derivatives markets may reduce the volume of business on the new issue market, which may create severe difficulties for the corporates, particularly the relatively smaller and newer ones, in raising fresh capital. Such a possibility cannot be denied by arguing that investors in derivatives are not the same as investors in new issues because there is no such rigid segmentation of investors.

20.11.6 Increased Regulatory Burden

As said earlier, the growth of derivatives increases the regulatory (supervisory) burden, regulatory concerns and regulatory costs in the economy. They weaken the regulatory frameworks. The experience suggests that the regulators the world over have had to leave many other tasks unattended, and to find out regulatory, supervisory, monitoring tools to ensure that derivatives do not lead to the fall of the financial system. The capital adequacy framework being introduced the world over as per the norms suggested by the Bank for International Settlements (BIS) at Basle in Switzerland is incapable of taking into account the risks involved in derivatives trading, because it is directed to deal with only credit risk. Derivatives expose the parties to operational risk, liquidity risk and legal risk also. Similarly, it has not been possible to find out the appropriate methods of accounting derivatives trading, and of capturing some concepts such as potential credit exposure in derivatives transactions. In a fast-paced, high-volume derivatives markets, no accounting position can really keep pace with the rapid changes in the market; any accounts can be rendered out of place or irrelevant in no time. It is being increasingly recognised that derivatives have tended to diminish the ability of governments to determine and influence exchange rates, interest rates, money supply, and so on, in their own economies. There has been a loss of sovereignty of the governments due to the growth of derivatives markets.

20.11.7 Adverse Empirical Evidences

Direct and indirect evidence comprising technical studies, the testimony of experts, financial folklore and the regulatory history strongly goes against derivatives. It has been held by many that the stockindex futures trading was responsible for the worldwide stock market crash in 1987; the studies by Brady Commission and Securities and Exchange Commission in the United States have found that futures trading was a significant factor in accelerating and exacerbating the 1987 stock market crash. In India, it has been found that (even) forward markets in commodities have often helped unscrupulous speculators to manipulate the markets, to corner the supplies and to organise 'bear or bull raids', as a result of which prices have fluctuated violently occasionally. Heavy losses worth billions of dollars suffered in derivatives markets by many companies in the United States and the UK—Orange County, Metallgesellschaft, Gibson Greetings, Proctor and Gamble, Barings—in 1995 have made the world realise afresh the dangers posed by derivatives to the investors and financial markets. In May 1994, as a result of information available on India's decision to import sugar, several Indian companies, NRIs and US Pension Funds indulged in massive futures/speculative trading in the international sugar markets, which led to a spiraling increase in sugar prices.

The testimony of cognoscenti against derivatives has been almost unanimous. We reproduce below the views of some of them as follows:

- '… The growth and complexity of derivatives should give us all cause for concern'—Alan Greenspan, President of the Federal Reserve Bank of New York.

- '… Futures and options are the tail wagging the dog. They have also escalated the leverage and volatility of markets to precipitous, unacceptable levels'—John Shad, Ex-Chairman, Securities and Exchange Commission, United States.
- '… Derivatives—that is, the 11-letter-four-letter-word'—R Syron, Chairman, American Stock Exchange.
- '… The extra-ordinary usefulness of speculation and speculative financial instruments as projected by the classical economists and market operators goes ill with the hostility which people who have to work hard for their living often develop against the mysterious gains that the speculators make in offices by dealing in goods which they would not even recognise'—A P Lerner.
- '...The new options and futures contracts ... serve mainly to allow greater leverage to short-term speculators and arbitrageurs … Collectively they contain considerable redundancy. Every financial market absorbs private resources to operate and government resources to police. The country cannot afford all the markets that enthusiasts may dream up …' James Tobin.

It is worth noting that in the United States, people in general also have always considered options to be speculative, risky, and there has been a considerable opposition to them by the leading security firms themselves; they have always carried the stigma of misuse and avoidance or violation of certain laws. In many countries, farmers and others have opposed options and futures tradings and have often agitated for their closure because of their being speculative and leading to price fluctuations. For hundreds of years, they have been notorious for being shady and causing many financial evils, including the collapse of economic systems. In 1978, the options faced a 'mountain of criticism bordering on sheer hostility' in England, and many people charged that the options market was just a casino. The fact that options and futures trading has often been banned or declared illegal can also be taken as a good evidence against them. Henry Kaufman, a noted economist has opined that the growing use of financial derivatives poses certain serious concerns. First, the initial high profitability in them inevitably pulls in a greater number of market participants which eventually generates excess capacity, depresses profit margins and induces many to move the marginal edge of risk-taking, which can lead to losses and bust. Second, derivatives may result in erosion of credit standards and greater exposure to credit risk. Third, they have a great potential for market disruption. The market risks in derivatives cannot always be managed and open positions cannot be covered before it goes hopelessly wrong. Whenever there is a slightest chance of trading halts or abandonment of market-making by leading dealers, the normal market access sinks. Thus, the volatility can balloon defeating even the best-planned strategy. Fourth, financial derivatives permit greater leverage in the system, allowing marginal borrowers to stay in the market longer than would otherwise be possible. Warren Buffet, a world-famous successful stock market investor has sarcastically remarked that ' the range of derivative contracts is limited only by the imagination of man'. According to him credit derivatives are time bombs for the parties involved and also for the financial system.

20.12 CRITIQUE OF INTRODUCTION OF DERIVATIVES IN INDIA

Given the serious crisis through which the Indian financial markets have been passing now, it would be unwise and undesirable to increase their speculative potential by adding highly speculative or 'red-hot'

instruments such as derivatives. Given the fact that while the primary market in shares is relatively more widespread geographically than the secondary market in them, and while the major part of the primary market in industrial securities is in debentures but the major part of secondary market is in equity shares, instruments such as stock futures and stock options would hardly benefit the large population and genuine investors. Given certain restrictions on the portfolio holdings of banks, insurance companies, provident funds and small savings organisation, and given their investment preferences, derivatives markets in India are bound to remain narrow, shallow and left at the mercy of market manipulators and speculators.

Before launching new instruments, it is imperative to learn lessons from the experience in other instruments recently launched. The progress in the case of CPs, CDs, stockinvests, and so on, has been extremely tardy; and all the efforts to develop secondary markets in debentures have met with little success. The experience in respect of OTCEI should show that the creation of well-organised, efficiently functioning futures and options exchanges is going to be an uphill task; it is also beyond the nation's means at present.

The experience the world over shows that the derivatives market may function with a semblance of stability and honesty, and at tolerable levels of speculation, only if they are closely and effectively controlled, regulated, supervised and monitored. The ground reality in India is that this is not possible in today's social, political and ethical milieu. The experience in commodities forward markets shows that market operators have been manipulating with impunity the prices to their advantage and to the detriment of the trade as a whole. The Forward Markets Commission has often been handicapped and unable to enforce provisions against illegal options contracts, kerb trading and various malpractices. The same has been true in respect of the stock market also. The multi-billion stock scam in 1992 followed by a series of financial scams, amnesia and the total lack of real action in respect of the findings of investigative agencies in this context, the vicious clout and stranglehold of the brokers and the ineffectiveness of the SEBI—in short, the destructive and perilous goings-on in the whole financial system, nay, in the whole country—undoubtedly signify that the regulatory framework in India totally lacks the capacity and will to make the markets function well and fairly as per the rules of the market. To introduce derivatives of doubtful utility in such a milieu would be unwise indeed.

In this context Patel committee has highlighted the following points. They (derivatives) have tremendous potential for evil rather than good; they have brought about frequent crisis situations and made markets increasingly volatile even in advanced countries with all their automation and sophistication. The increasing use of these instruments for speculation rather than risk management is turning the stock exchanges around the globe into legalised casinos, threatening their solvency, stability and integrity. The world over, most of the derivatives lack transparency, lead to speculative excesses, and are not understood even by the financial experts. They are not suitable for conservative investors, and the majority of investors in our country are essentially conservative who are mainly interested in the safety and security of their capital. The serious fall-out of the increasing use of derivatives has resulted in a frightening menace in the form of proprietary and over-the-counter tradings which are carried out with a vengeance, making a mockery of the laws on insider trading, disclosure standards, and market manipulation. The Government of India should not be in a hurry to allow futures trading as it could mean a prescription for the turbulence in our financial system. The time is not yet ripe in our country for experimenting with financial derivatives.[4]

[4]SEBI, Report of the Committee to Review the System of Carry Forward Transactions, Bombay, March 1995.

SUMMARY

- Derivatives or derivative securities are contracts which are written between two parties (counterparties) and whose value is derived from the value of underlying widely-held and easily marketable assets such as agricultural, other physical (tangible) commodities and financial assets.
- The counterparty that contracts to buy is said to have created a long position and the counter party that contracts to sell is said to have established a short position.
- Derivatives are said to provide services such as managing risks efficiently, discovering equilibrium market prices, enhancing market liquidity, reducing transactions costs, facilitating efficient portfolio management, smoothening price fluctuations (variations) across time and space, avoiding gluts and shortages, and enabling the financial system to achieve Pareto Optimum by developing 'complete markets'.
- Derivatives are also said to be highly speculative and risky, increase volatility and financial excesses in the financial system, displace genuine investment, increase micro and macro prudential concerns and the regulatory burden of the authorities, add to the waste on financial markets and are of little help in creating real wealth.
- Derivatives are traded either in organized exchanges or in an over the counter market.
- Derivative contracts are categorized on the basis of their nature of the contract and types of assets. Futures, forwards, options and swaps are major broad derivative instruments traded in the market.
- Popularly the cost of carry model is used for valuation of futures, and binomial tree and Black–Scholes models are used for valuation of options.
- Since independence the Government of India has appointed various committees time to time to devise the proper regulatory framework for development of derivatives market in India. A D Shroff Committee (1950) which formed the basis of the Forward Contracts (Regulation) Act, 1952, M L Dantwala Committee (1966) and A M Khusra Committee (1979) which reviewed the functioning of Forward Market Commission, K N Kabra committee (1994) for development of commodity derivatives market, L C Gupta Committee (1997) for devising appropriate regulatory framework for derivatives trading in India and J R Varma committee (1998) to recommend measures for risk containment in derivatives market in India.
- The major financial derivative instruments which are traded in Indian market are (i) index futures, (ii) index options, (iii) stock futures, (iv) stock options, (v) interest rate futures and (vi) rupee currency.
- The major commodities traded in various commodity exchanges include agricultural products, bullion, metals other than bullion and energy.
- The Futures and Options (F&O) trading system of NSE is called NEAT-F&O trading system.
- The share of OTC-traded (OTCT) derivatives has increased over the years globally.
- In the initial years, the share in turnover of commodity derivatives was mostly dominated by the regional stock exchanges such as Rajkot Commodity Exchange Ltd., Chamber of Commerce, Hapur. Gradually, over the period, the share of national commodity exchanges such as MCX, NCDEX and NMCE has increased.

KEY TERMS

Derivatives
Long position
Short position
Financial derivatives
Commodity derivatives
Forward
Future
Option
Call option
Put option
American option
European option
Swap
Interest rate swap
Currency swap
Warrants
Credit derivatives
Weather derivatives
Freight derivatives
Property derivatives
Open interest
Implied interest rate
Implied volatility
Basis
Contango
Backwardation
Settlement price
Strike price
In-the-money
Out-of-the money
At the money
Cost of carry
Convenience yield
Badla system
Binomial option pricing
Black–Schole model

QUESTIONS

1. Define derivative. Discuss the various services provided by derivatives.
2. Explain the nature of futures as an important derivative and how it helps in functioning of the market.
3. What are the differences between forward and future contracts?
4. Give a brief note on different types of options and highlight the various services provided by them.
5. Explain the different types of swaps used in derivative market and how it plays an important role for the functioning of the derivative market.
6. Analyse the trends in growth and structure of derivative markets abroad.
7. 'Derivatives are an overkill; they do more harm than good.' Explain.
8. What is the scope of derivatives market in India?
9. What have been the policies measures taken to develop the derivatives market in India in recent years?
10. Analyse the trends in growth and structure of commodity derivatives market in India.
11. Write short notes on the following
    (a) Open interest
    (b) Implied volatility
    (c) Moneyness
    (d) Credit derivatives
    (e) Interest rate swap

12. A 1-year long forward contract on a non-dividend paying stock is entered into the market when the stock price was ₹300 and the risk-free rate was 7 percent per annum with continuous compounding. With this answer the following questions (i) what are the forward price and initial value of the contract? (ii) If 6 months later the price of the stock was ₹315 and risk-free rate is same 7 percent, then what are the forward price and value of the forward contract?
13. A stock index value is currently 5380. The risk-free rate is 7 percent per annum with continuous compounding and the dividend yield on the index is 5 percent per annum. What should be the future price for a 3-month contract?
14. The spot price of the gold is ₹3050 per gram. The storage cost is ₹50 per gram payable quarterly in advance. Assuming that interest rate is 12 percent per annum for all maturities, calculate the future price of gold for delivery in 9 months.
15. A stock price is currently ₹200. Over each of the next two 6 month's periods, it is expected to go up by 10 percent or down by 10 percent. The risk-free rate is 7 percent per annum with continuous compounding. What is the value of the 1-year European call option with a strike price of ₹200?
16. Determine the value of a 3-month European call option on a stock, which pays a dividend of ₹1.50 after 2 months. Given that the current stock price is ₹50 and strike price of the stock is ₹51. Let the T-bill rate is 11 percent per annum and the volatility is 30 percent per annum.
17. Calculate the price of a European put option on a non-dividend paying stock when the stock price is ₹70, the strike price is ₹72, the risk-free rate is 8 percent per annum, the volatility is 35 percent per annum and the maturity of the option is 6 months.
18. A call option on a non-dividend paying stock has a market value of ₹5. The current price of underlying stock is ₹21, the strike price is ₹22, the time to maturity is 4 months and risk-free rate of interest is 6 percent. What is the implied volatility?

Part 6

International Dimensions of Financial Markets

The chapters in this part deal with the issues related to the international dimensions of financial system. The first chapter in this part discusses the nature and organisation of foreign exchange market, risks involved in the foreign exchange market, determination of exchange rate, growth of foreign exchange market in India and various emerging issues related to foreign exchange market. Further, a detailed analysis on the uses, components, trends, determinants and drawbacks of foreign capital inflows to India has been presented in the second chapter in this part. This chapter also deals with various emerging issues related to foreign investments (both FDI and FII) in India.

CHAPTERS

21. Foreign Exchange Market

22. Foreign Capital Flows

Foreign Exchange Market

21 CHAPTER

Learning Objectives

- **LO 1** Know the structure of foreign exchange market and its prominent players in India
- **LO 2** Recognise various trading platforms and the risk involved in the FEM
- **LO 3** Understand different types of exchange rates and exchange rate system
- **LO 4** Explain global and Indian foreign exchange market activity and trends in exchange rates
- **LO 5** Describe the issues in foreign exchange market

21.1 INTRODUCTION

The Indian economy being an open economy, it is now essential to extend the discussion of the Indian financial system to its international dimensions. In terms of international trade and financial flows, its openness has increased consistently over the years. The open economy reality introduces two in place of one—kinds of monetary units in transactions or exchange mechanism, namely, the domestic monetary unit and the foreign monetary unit. The latter is called foreign exchange. In addition to coins, notes and bank deposits denominated in foreign monetary units, foreign exchange generally includes a variety of highly liquid claims denominated in foreign monetary units. The liquid claims denominated in foreign monetary units can increase through international trade and investments, but these would not be possible without the arrangements or mechanism for buying and selling foreign currencies because the rupee is not the international means of exchange. In this context, the importance of foreign exchange market increases which allows currencies to be exchanged in order to facilitate international trade or financial transactions.

The market in which national monetary units or claims are exchanged for the foreign monetary units is defined as foreign exchange market (FEM). It is cleared at a conversion price, that is, at the exchange rate, which is an important part of financial analysis. It facilitates the transfer of purchasing power denominated in one currency to another. International companies rely on the foreign exchange market to exchange their home currency for a foreign currency that they need to purchase imports or use for foreign investments. They also need the foreign exchange market to exchange a foreign currency that they receive into their home currency. In the Indian context, according to the Foreign Exchange Regulation Act (FERA), 1973, foreign

exchange means foreign currency and it includes (a) all deposits, credits and balances payable in any foreign currency, and any drafts, traveller's cheques, letters of credit and bills of exchange expressed or drawn in Indian currency but payable in any foreign currency, and (b) any instrument payable, at the option of the drawee or holder thereof or any other party thereto, either in Indian currency or in foreign currency or partly in one and partly in the other.

The global FEM is said to be the oldest, biggest, most extensive or geographically spread, most active and quick, fastest growing and most liquid market in the world. *The FEM is not a physical place; it is an informal, electronically linked network of big banks, foreign exchange brokers and dealers whose function is to bring buyers and sellers together.* It is dispersed throughout the big and small financial centres in the world, the leading ones being in London, New York, Paris, Zurich, Tokyo, Milan, and Frankfurt. The trading in FEM is usually done 24 hours a day by telephones, display monitors, telex and fax machines, and the satellite communications network called the *Society for Worldwide International Financial Telecommunications (SWIFT),* which is a computer-based communication system. Each participating bank has a separate 'foreign exchange-trading room', and most transactions are based on oral communications to begin with; the written documents follow only later. There exists an informal code of moral conduct which has given a status of a bond to the word given by exchange dealers. The FEM operates on very narrow spreads between buying and selling prices; they can be smaller than a tenth of a percent of the value of the currency traded, and they are about one-fiftieth or less of the spread faced on bank notes by international travellers. Yet, because the volumes of transactions involved are huge, traders in FEM stand to make huge profits or losses. The wealth accumulated in a given country is not always committed to the financial institutions there. The international aspects of saving and investment are reflected in the volume of capital flows between countries. While this chapter discusses various dimensions of foreign exchange market, exchange rates and foreign exchange reserves (FERs), the next chapter discusses matters related to international capital flows.

21.2 FOREIGN EXCHANGE MARKET STRUCTURE

LO 1

Know the structure of foreign exchange market and its prominent players in india

Most foreign exchange markets in developing countries are either pure dealer markets or a combination of dealer and auction markets. In the dealer markets, some dealers become market makers and play a central role in the determination of exchange rates in flexible exchange rate regimes. Market makers set two-way exchange rates at which they are willing to deal with other dealers. The bid offer spread reflects many factors, including the level of competition among market makers. In most of the EMEs, a code of conduct establishes the principles that guide the operations of the dealers in the foreign exchange markets. It is the central bank, or professional dealers association, which normally issues the code of conduct (Canales-Kriljenko, 2004). In auction markets, an auctioneer or auction mechanism allocates foreign exchange by matching supply and demand orders. In pure auction markets, order imbalances are cleared only by exchange rate adjustments. Pure auction market structures are, however, now rare and they generally prevail in combination with dealer markets.

The Indian foreign exchange market is a decentralised multiple dealership market comprising two segments—the spot and the derivatives market. In the spot market, currencies are traded at the prevailing rates and the settlement or value date is 2 business days ahead. The 2-day period gives adequate time for the parties to

send instructions to debit and credit the appropriate bank accounts at home and abroad. The major sources of supply of foreign exchange in the Indian foreign exchange market are receipts on account of exports and invisibles in the current account and inflows in the capital account such as foreign direct investment (FDI), portfolio investment, external commercial borrowings (ECB) and non-resident deposits. On the other hand, the demand for foreign exchange emanates from imports and invisible payments in the current account, amortisation of ECB (including short-term trade credits) and external aid, redemption of NRI deposits and outflows on account of direct and portfolio investment. In India, the government has no foreign currency account, and thus the external aid received by the government comes directly to the reserves and the Reserve Bank releases the required rupee funds. Hence, this particular source of supply of foreign exchange is not routed through the market and as such does not impact the exchange rate.

The derivatives market encompasses forwards, swaps and options. Though forward contracts exist for maturities up to 1 year, majority of forward contracts are for 1 month, 3 months or 6 months. Forward contracts for longer periods are not as common because of the uncertainties involved and related pricing issues. A swap transaction in the foreign exchange market is a combination of a spot and a forward in the opposite direction. The foreign exchange derivative products that are now available in Indian financial markets can be grouped into three broad segments, *viz*., forwards, options (foreign currency rupee options and cross-currency options) and currency swaps (foreign currency rupee swaps and cross-currency swaps). The detailed discussion on these derivative instruments is given in the Chapter 22. As in the case of other EMEs, the spot market is the dominant segment of the Indian foreign exchange market. Like other markets, the spot segment of the foreign exchange market has two parts: *wholesale* and *retail*.

21.2.1 Retail Market

The exchange of bank notes, bank drafts, currency, ordinary and traveller's cheques between private customers, tourists and banks takes place in the retail market. The RBI has granted two types of money changer's licences to certain established firms, hotels, shops and other organisations to deal in currency notes, coins and traveller's cheques to a limited extent. While the 'full-fledged moneychangers' can undertake both purchase and sale transactions with the public, 'restricted money changers' can only purchase foreign currency from the foreign tourists.

21.2.2 Wholesale Market

The wholesale market is primarily an interbank market in which major banks trade in currencies held in different currency-dominated bank accounts, that is, they transfer bank deposits from seller's to buyer's accounts. This market is far larger than the bank notes market. Only the head offices and regional offices of the major commercial banks are the market makers (entities which deal with assets on their own accounts) in the wholesale market. Most of the small banks and the local offices of even the major banks do not deal directly in the interbank market. They usually have a credit line with large banks or with their head offices and they serve their customers through the latter. Through correspondent relationship with banks in other countries, major banks have ready access to foreign currencies. As indicated earlier, interbank foreign currency transactions usually do not involve a physical transfer of currency, they simply involve bookkeeping entries among banks. There is no central location for this market and trading in it is continuous. Banks do not normally charge a commission on their currency transactions, they profit from the spread between the

buying and selling rates. The *interbank market* can thus be said to have two parts: direct and indirect. In the direct market, banks quote buying and selling prices directly to each other and all participating banks are market makers. It has been sometimes characterised as a '*decentralised*, *continuous*, *open-bid*, *double-auction*' market. In the indirect market, the banks put orders with brokers who put them on 'books', and try to match purchases and sales orders for different currencies. They charge commission to both the buyers and sellers. This market is characterised as '*quasi-centralised*, *continuous*, *limit-book*, *single-auction*' market.

21.3 PLAYERS IN THE FOREIGN EXCHANGE MARKET IN INDIA

Players in the Indian market include (a) ADs, mostly banks who are authorised to deal in foreign exchange, (b) foreign exchange brokers who act as intermediaries and (c) customers—individuals and corporates, who need foreign exchange for their transactions. Though customers are major players in the foreign exchange market, for all practical purposes they depend upon ADs and brokers. In the spot foreign exchange market, foreign exchange transactions were earlier dominated by brokers. Nevertheless, the situation has changed with the evolving market conditions, as now the transactions are dominated by ADs. Brokers continue to dominate the derivatives market. ADs have been divided into different categories. The licences for ADs are issued to banks and other institutions, on their request, under Section 10(1) of the Foreign Exchange Management Act, 1999. All scheduled commercial banks, which include public sector banks, private sector banks, and foreign banks operating in India, belong to category I of ADs. All upgraded full-fledged money changers (FFMCs) and select regional rural banks (RRBs) and co-operative banks belong to category II of ADs. Selected financial institutions such as EXIM Bank belong to category III of ADs. Currently, there are 86 (Category I) ADs operating in India out of which 5 are co-operative banks. All merchant transactions in the foreign exchange market have to be necessarily undertaken directly through ADs. However, to provide depth and liquidity to the interbank segment, ADs have been permitted to utilise the services of brokers for better price discovery in their interbank transactions.

In order to further increase the size of the foreign exchange market and enable it to handle large flows, it is generally felt that more ADs should be encouraged to participate in the market making. The customer segment of the foreign exchange market comprises major public sector units, corporates and business entities with foreign exchange exposure. It is generally dominated by select large public sector units such as Indian Oil Corporation, ONGC, BHEL, SAIL, Maruti Udyog, and also the Government of India (for defence and civil debt service) as also big private sector corporates such as Reliance Group, Tata Group, and Larsen and Toubro, among others. In recent years, foreign institutional investors (FIIs) have emerged as major players in the foreign exchange market.

The Reserve Bank intervenes in the market essentially to ensure orderly market conditions. The Reserve Bank undertakes sales/purchases of foreign currency in periods of excess demand/supply in the market. Foreign Exchange Dealers' Association of India (FEDAI) plays a special role in the foreign exchange market for ensuring smooth and speedy growth of the foreign exchange market in all its aspects. All ADs are required to become members of the FEDAI and execute an undertaking to the effect that they would abide by the terms and conditions stipulated by the FEDAI for transacting foreign exchange business. The FEDAI is also the accrediting authority for the foreign exchange brokers in the interbank foreign exchange market.

21.4 FOREIGN EXCHANGE MARKET TRADING

LO 2

Recognise various trading platforms and the risk involved in the FEM

The currencies are traded on 'spot' or 'cash' basis, that is, for immediate delivery and on 'forward' basis, that is, for delivery at sometime in future at the price fixed today. In the case of spot delivery, whereas bank notes in major currencies are exchanged instantaneously over-the-counter, in the interbank spot market funds are not generally received until 2 business days after the intimation of transactions. Forward contracts are normally available for 1–12 month delivery. Forward trading generally occurs in two different ways: outright and swap. The former is a contract for an exchange of currencies at some future value date. The latter, on the other hand, is a combination of two simultaneous trades: an outright forward contract and an opposing spot deal.

A variety of trading platforms are used by dealers in the EMEs for communicating and trading with one another on a bilateral basis. They conduct bilateral trade through telephones that are later confirmed by fax or telex. Some dealers also trade on electronic trading platforms that allow for bilateral conversations and dealing such as the Reuters Dealing 2000–2001 and Dealing 3000 Spot systems. Bilateral conversations may also take place over networks provided by central banks and over private sector networks. Reuters' Dealing System has been the most popular trading platform in EMEs. In the Indian foreign exchange market, spot trading takes place on four platforms, *viz*., FX CLEAR of the CCIL set up in August 2003; FX Direct that is a foreign exchange-trading platform launched by IBS Forex (P) Ltd. in 2002 in collaboration with Financial Technologies (India) Ltd.; and two other platforms by the Reuters—D2 platform and the Reuters market data system (RMDS) trading platform that have a minimum trading amount limit of US$ 1 million. FXCLEAR and FX Direct offer both real-time order matching and negotiation modes for dealing. The real-time matching system enables real-time matching of currency pairs for immediate and auto execution in both the spot and forward segments. In the negotiated dealing system, on the other hand, participant is free to choose and negotiate with his counter-party on all aspects of the transaction, thereby offering him flexibility to select the underlying currency as well as the terms of trade. These trading platforms cover the US dollar–Indian Rupee (USDINR) transactions and transactions in major cross-currencies (EURIUSD, USDIJPY, GBPIUSD and so on), though USD–INR constitutes most of the foreign exchange transactions in terms of value. It is the FX-CLEAR of the CCIL that remains the most widely used trading platform in India. This platform has been given to members free of cost. The main advantage of this platform is its offer of straight-through processing (STP) capabilities as it is linked to CCIL's settlement platform. In the forward segment of the Indian foreign exchange market, trading takes place both over-the-counter (OTC) and in an exchange-traded market with brokers playing an important role. The trading platforms available include FX CLEAR of the CCIL, RMDS from Reuters and FX Direct of the IBS.

21.5 RISK MANAGEMENT IN THE FEM

The foreign exchange market is characterised by constant changes and rapid innovations in trading methods and products. While the innovative products and ways of trading create new possibilities for profit, they also pose various kinds of risks such as settlement risk, market risk, credit risk and operational risk to the market. The foreign exchange settlement risk arises because the delivery of the two currencies involved in a trade usually occurs in two different countries, which, in many cases are located in different time zones. Most

of the banks in the EMEs use some form of methodology for measuring the foreign exchange settlement exposure. Many of these banks use the single day method, in which the exposure is measured as being equal to all foreign exchange receipts that are due on the day. Some institutions use a multiple day approach for measuring risk. Several emerging markets in recent years have implemented domestic real-time gross settlement (RTGS) systems for the settlement of high value and time critical payments to settle the domestic leg of foreign exchange transactions. Recognising the systemic impact of foreign exchange settlement risk in pursuance of the recommendations of the Sodhani Committee, the Reserve Bank had set up the Clearing Corporation of India Ltd. (CCIL) in 2001 to mitigate risks in the Indian financial markets. The CCIL commenced settlement of foreign exchange operations for interbank USD–INR spot and forward trades from 8 November, 2002 and for interbank USD–INR cash and tom trades from 5 February, 2004. The CCIL undertakes settlement of foreign exchange trades on a multilateral net basis through a process of novation and all spot, cash and tom transactions are guaranteed for settlement from the trade date. Every eligible foreign exchange contract entered between members gets novated or replaced by two new contracts—between the CCIL and each of the two parties, respectively. Following the multilateral netting procedure, the net amount payable to, or receivable from, the CCIL in each currency is arrived at, member-wise. The Rupee leg is settled through the members' current accounts with the Reserve Bank and the USD leg through CCIL's account with the settlement bank at New York. The CCIL sets limits for each member bank on the basis of certain parameters such as member's credit rating, net worth, asset value and management quality.

Apart from managing the foreign exchange settlement risk, participants also need to manage market risk, liquidity risk, credit risk, and operational risk efficiently to avoid future losses. As per the guidelines framed by the Reserve Bank for banks to manage risk in the interbank foreign exchange dealings and exposure in derivative markets as market makers, the boards of directors of ADs (category-I) are required to frame an appropriate policy and fix suitable limits for operations in the foreign exchange market. The net overnight open exchange position and the aggregate gap limits need to be approved by the Reserve Bank. The open position is generally measured separately for each foreign currency consisting of the net spot position, the net forward position and the net options position. Various limits for exposure, *viz*., overnight, daylight, stop loss, gap limit, credit limit, value at risk (VaR), and so on, for foreign exchange transactions by banks are fixed. Within the contour of these limits, front office of the treasury of ADs transacts in the foreign exchange market for customers and own proprietary requirements. These exposures are accounted, confirmed and settled by back office, while mid-office evaluates the profit and monitors adherence to risk limits on a continuous basis.

In the case of market risk, most banks use a combination of measurement techniques including VaR models. The credit risk is generally measured and managed by most banks on an aggregate counter-party basis so as to include all exposures in the underlying spot and derivative markets. Some banks also monitor country risk through cross-border country risk exposure limits. Liquidity risk is generally estimated by monitoring asset liability profile in various currencies in various buckets and monitoring currency-wise gaps in various buckets. Banks also track balances to be maintained on a daily basis in Nostro accounts, remittances and committed foreign currency term loans while monitoring liquidity risk.

21.6 EFFICIENCY OF THE FOREIGN EXCHANGE MARKET

The efficiency of the foreign exchange market is often gauged in terms of bid-ask spread. The bid-ask spread reflects the transaction and operating costs involved in the transaction of the currency. These costs include

phone bills, cable charges, bookkeeping expenses and trader salaries among others. In the spot segment, it may also include the risks involved in holding the foreign exchange. These costs/bid-ask spreads are expected to decline with the increase in the volume of transactions in the currency. The finance theory identifies three basic sources of bid-ask spreads: (a) order processing costs, (b) inventory holding costs, and (c) information costs of market making, and each one is influenced by trading volume in a particular manner (Hartmann, 1999). The low and stable bid-ask spread in the foreign exchange market, therefore, indicates that market is efficient with underlying low volatility, high liquidity and less of information asymmetry.

The spread in the Indian foreign exchange market has declined overtime and is very low at present. In India, the normal spot market quote has a spread of 0.25 of a paisa to 1 paise, whereas swap quotes are available at 1–2 paise spread. A look at the bid-ask spread in the rupee–US dollar spot market reveals that during the initial phase of market development (i.e. till the mid-1990s), the spread was high and volatile due to a thin market with unidirectional behaviour of market participants. In the subsequent period, with relatively deep and liquid markets, the bid-ask spread declined sharply and has remained low and stable, reflecting efficiency gains. It was empirically observed that expected volatility of the rupee–dollar exchange rates could impact the spread which increases with the increase in volatility (RBI, RCF, 2005–2006). However, the trading volume has negligible impact on the exchange rate spread. The intercept of the estimated equation is highly significant showing the flatness of the spread in the Indian foreign exchange market. The flat and low spread can be attributed to lower volatility in the foreign exchange market.

21.7 EXCHANGE RATES

The exchange rate (ER) is the price of one country's currency (money) in terms of another country's currency (money).

LO 3

Understand different types of exchange rates and exchange rate system

21.7.1 Types of Exchange Rates

It has been implicitly assumed so far that a single price clears the FEM, that is, we have the exchange rate in the FEM. This, however, is an unrealistic assumption because actually a complex variety of exchange rates exists at the same time between the same two currencies. There are different ERs for bank notes, bank drafts, cheques, buying and selling, respectively. The rates at which spot and forward transactions take place are known as 'spot rate (SR)' and 'forward rate (FR)', respectively. There are retail spot rates and interbank spot rates; the former is based on the latter. Then there are 'cross rates' which are exchange rates between two currencies neither of which is the US dollar, and which are calculated by using the dollar rates for both the currencies. The economists make a distinction between the actual or 'nominal exchange rate' (NER) and the 'real exchange rate' (RER). The latter indicates the real purchasing power of one currency relative to another currency; it is the NER adjusted for changes in the relative purchasing power of each currency since some base period. Formally,

$$\text{REER}_r = \text{NEER}_t \times \frac{(1 \times \text{INF}_a)^t}{(1 + \text{INF}_h)^t}$$

where INF_a and INF_h are the rates of inflation in a foreign country and the home country, respectively; t is time period and other terms are as defined above.

The ERs discussed above are the bilateral rates, that is, they are the rates between any two individual currencies. The ER *vis-a-vis* different currencies does not change uniformly in terms of direction and magnitude. In order to obtain a summary measure of changes in the ER of a currency *vis-a-vis* all the other (major) currencies, that is, in order to obtain a measure of the multilateral ER, economists have developed the concepts and measures of the '*nominal effective exchange rate*' (NEER) and the '*real effective exchange rate*' (REER). The term, effective, connotes the suitable weighted average. While NEER is a weighted average of the bilateral nominal exchange rates of the home currency against selected foreign currencies, REER is obtained by deflating NEER by the corresponding relative inflation rates. There are different weighting systems which can be used for computing NEER and REER; for example, bilateral exports-based (or trade, i.e. exports plus imports-based) weights, and a combination of these and commodity weights which reflect the degree of competition that exists between the home country and other countries in the third country markets.[1]

Certain conventions exist in the world FEMs with regard to the way spot rates are quoted. Interbank trades in dollars are quoted either in 'American terms' (number of US$ per unit of foreign currency) or 'European terms' (number of foreign currency units per US$). There is a practice of giving either 'direct quotation' (number of home currency units, say rupees, per unit of foreign currency, say pound sterling) or 'indirect quotation' (the number of units of foreign currency, say pound sterling per unit of home currency, say a rupee) when banks deal with non-bank customers. The Indian FEM was following the system of 'indirect quotes' until August 1993; since then it has switched over to 'direct quotes'.

The ER quotations in the press are interbank rates; firms, individuals and travellers cannot trade at those rates. The spreads (difference between the buying and selling rates) on smaller transactions is much wider than the one in the interbank market, reflecting higher transactions and other costs on per unit of smaller transactions. Banks charge their retail customers slightly more than the going interbank 'selling rate' or 'ask rate', and pay slightly less than the interbank 'buying rate' or 'bid rate'; the extent of the makeup or markdown depends on the size of the retail transaction.

In the forward market, commercial customers are quoted the 'outright rate', that is, the actual price, whereas in the interbank market, the forward rate (FR) is quoted only as a discount from or a premium on the spot rate (SR). This forward differential is known as the 'swap rate'. The foreign currency is said to be at '*forward discount*' if FR < SR; at '*forward premium*' if FR > SR; and at 'flat' if FR = SR. The annualised forward discount or premium rate (FDR or FPR) can be calculated by using the following formula:

$$\text{FDR or FPR} = \left(\frac{\text{Forward rate} - \text{Spot rate}}{\text{Spot rate}}\right) \times \frac{12}{\text{Forward Contract marturity in months}}$$

In a free and competitive FEM, spot and forward rates move in the same direction. They are linked by the interest rates differential between the two countries, and the current market expectations about the future spot rates (events). Generally, forward rates predict future spot rates. Theoretically, the forward rates should equal the expected future spot rates. The forward discount or premium is closely related to the interest differential between the two currencies. The currency of the country with lower interest rates should be at a forward premium in terms of the currency of the country with higher rates. In the absence of transactions costs, the interest differential is equal to the differential between the spot and forward rates. When this condition is met, the forward rate is said to be at interest parity.

[1]For further understanding, see Jadhav, Narendra, 'Effective Exchange Rate Indices: A New Methodology for Incorporating the Third Country Competition', in *National Institute of Bank Management, International Monetary, Banking, and Trade Systems and Economic Development*, Pune, 1992.

21.7.2 Devaluation and Depreciation of Exchange Rate

It is useful to understand the meaning and measures of exchange rate changes at this juncture. There is a convention to distinguish devaluation (revaluation) from depreciation (appreciation) of the currencies or exchange rates. The devaluation (revaluation) of a currency refers to a policy-determined decrease (increase) in its official exchange rate or par value relative to gold or another currency. Depreciation (appreciation) refers to a decline (increase) in the price or exchange rate of a given currency relative to a foreign currency in the market under the flexible exchange rate system. This convention not withstanding, devaluation and depreciation essentially mean the same thing, both have the same effects, and the way of measuring both of them is the same. The percentage change in the direct exchange rate between the rupee and dollar (i.e. the percentage change in the rupee value of dollar) can be calculated as follows:

$$\text{Appreciation (Depreciation) of the Dollar} = \left[\frac{E_1 - E_0}{E_0}\right] \times 100$$

$$\text{Depreciation (Appreciation) of the Rupee} = \left[\frac{E_0 - E_1}{E_1}\right] \times 100$$

where E_1= New rupee value of dollar, and E_0 = Old rupee value of dollar.

It may be noted that the two rates would not be equal because the base of which the change is calculated differs in two cases; the value of one currency is the inverse of the value of another currency.

21.7.3 Exchange Rate Systems

Different kinds of exchange rate systems have been tried by different countries in the world. Of them, the two extreme types are the fixed and flexible rates systems. In between, there have been the systems of 'crawling peg', 'mixed flexible and fixed rates', 'target zone', 'managed or pegged or dirty float', and 'free or clean float'.

Fixed Exchange Rate System

Under the fixed exchange rate system of the gold standard or gold-exchange standard or dollar exchange standard or IMF (Bretton Woods) standard, the governments are committed to maintain the stated or official par values of their currencies, allowing the deviation of currency value from the par value only within a fixed or an agreed upon percentage, say, 1 percent on either side of the par value. The CB intervenes in the FEM to maintain the par value, and if it could not be maintained, the exchange rate is officially devalued or revalued. The ER is not used as a tool for correcting imbalances in the balance of payments (BOP).

Intermediate Exchange Rate Systems

When the range of deviations mentioned above is allowed to be larger, say, 2.5 or 3 percent, it is known as the wider band system. This is also known as a target zone system. Under the crawling peg, the par value is automatically revised; the CB intervenes whenever the ER approaches a 'support point' and revises the par values itself. Under a mixed system, there is a fixed rate for some transactions, *viz*., those on capital account, and a flexible rate for other transactions, *viz*., those on current account. This is also known as the dual exchange rates system. Under the system of free or clean float, the ERs are completely determined by the competitive forces of demand and supply of currencies. When the nations with floating currencies try

to smooth out ER fluctuations with the help of CB intervention, it is known as managed or dirty float. The management of float has been undertaken for various purposes: to preserve an orderly pattern of ER changes without resisting the fundamental market forces; or to lean against the wind, that is, to moderate or prevent abrupt short- and medium-term fluctuations so as to delay rather than resist fundamental ER adjustment; or to unofficially peg the ER, that is, to resist the fundamental ER adjustments.

21.7.4 Appropriate Exchange Rate Regime

What is the appropriate exchange rate regime (ERR)? It has been argued that it is impossible to have combination of (a) full capital account convertibility (FCAC), (b) domestic monetary policy independence, and (c) a stable currency. If a country has capital account convertibility (CAC), it has to give up either (b) or (c) mentioned above. In practice, countries at one time or other have adopted fixed pegs, or crawling pegs, or fixed rates with bands, or managed floats with no pre-announced paths, or independent floats with policy intervention for moderating the rate of change in ER, that is, for preventing undue ER fluctuations. Now, a fixed exchange rate regime appears to be out of favour in all the countries. The floating or flexible ER system is perceived to be less crisis-prone, but a completely free float without any intervention by the authorities is also out of favour at present. Currently, most of the countries have adopted intermediate (between fixed and free float) ER regime.

21.7.5 Changes in the Indian ER Regime

In India, there have been far reaching changes in the ER regime over the years. The rupee was linked with the pound sterling before the IMF came into being. When India became a member of the IMF, the sterling–rupee link was severed *de jure* sometime in 1947, and the par value of the rupee came to be expressed in terms of gold. However, the exchange value of the rupee in terms of the pound sterling was not disturbed *de facto*. India informed the IMF that the par value of rupee would be 4.145142857 grains (0.268601 gram) of fine gold which corresponded to the exchange rate of ₹1 = 1s 6d. This rate remained unchanged when the pound sterling was devalued in September 1949 as the rupee also was devalued to an identical extent in 1949. However, the devaluation of the rupee in September 1949 and June 1966 in terms of gold resulted in the reduction of the par value of rupee in terms of gold to 0.186621 gram of fine gold per rupee first and to 0.118489 gram later.

In 1971, while the gold parity as well as the US dollar parity of rupee as fixed in June 1966 remained unchanged, the rupee–sterling rate was allowed to fluctuate with reference to the par value of rupee in terms of the US dollar. The exchange rate of rupee was pegged to the US dollar, while the pound sterling continued to be the intervention currency. This arrangement had a very short life span; it existed only during August–December 1971. In December 1971, the pegging of the exchange rate of the rupee to the US dollar was discontinued and a central rate for the rupee equivalent to the average of the RBI buying and selling rates for the pound sterling came to be adopted. This arrangement lasted till 24 September, 1975 when the rupee was delinked from the pound sterling.

With effect from 25 September, 1975, the exchange value of rupee was determined with reference to the daily exchange rate movements of a selected number of currencies which were the major trading partners of India. In other words, since that day, the rupee came to be linked with a basket of currencies. The selection

of the currency units and weights to be assigned to them was left to the discretion of the RBI subject to the approval of the government. In order to discourage speculation in the foreign exchange markets on the likely changes in the rupee–sterling rate and other foreign currency rates, the actual composition of the basket was not disclosed. Under this arrangement also, the pound sterling continued to be the currency of intervention. Under the system of basket-pegging, the value of the domestic currency with respect to the numerair (intervention) currency was changed in line with the movements in the weighted average of the value of the trading partners' currencies *vis-a-vis* the numerair currency.

The choice of basket peg instead of a single-currency-peg was made with a view to imparting stability to the exchange rate of rupee. A single-currency peg faces the danger of greater volatility in the exchange rate of the pegged currency emanating from the fluctuations in the currency to which pegging has been done. It is, however, doubtful whether the exchange value of the rupee in reality remained stable as a result of the system of the basket-peg. The number of adjustments in the rupee–sterling rate had increased from 3 in 1975 to 13 in 1979, 34 in 1980, 71 in 1981, 94 in 1982, 124 in 1983, 142 in 1984, 154 in 1985, 200 in 1988 and 252 in 1989–1990. During 1975–1992, the ER regime in India was characterised by daily announcements by the RBI of its buying and selling rates to authorised dealers for merchant transactions.

The basket-peg system was replaced by the system of 'Liberalised Exchange Rate Management' (LERM) or the dual exchange rates in March 1992, which lasted till February 1993. In March 1992, the dollar replaced pound sterling as the intervention currency. During this period, both official and market-determined ERs existed; ADs had to surrender 40 percent of all current exchange receipts to the RBI at the official rate, and the remaining 60 percent could be traded at the market rate. The former used to be lower than the latter. This system was replaced by the 'Unified Exchange Rate System' (UERS) or the market-determined floating rate system in February 1993. Important ERs which exist under this system are the FEDAI indicative rate (which is the average of the middles of highs and lows of the FEDAI buying and selling rates), the RBI buying and selling, that is, intervention rates and the RBI reference rate. The RBI rates are arrived at on the basis of market (FEDIAI) rates.

As a part of UERS, trade account convertibility of the rupee was introduced on 2 March, 1993. Over the next 18 months, restrictions on a number of other current account transactions were relaxed, and the rupee was made convertible for many current account transactions from 20 August 1994. India now stands on the threshold of introducing capital account convertibility. Similarly, the FERA, 1973 has now been replaced by the Foreign Exchange Management Act (FEMA).

As in many other industrialised and newly emerging countries, India has now adopted an ER regime of independent float with intervention by the authorities to moderate changes in ER and to avoid undue fluctuations or volatility in the rupee rate. The purchases and sales of currencies by the RBI are discreet and smooth, and the RBI tries to ensure that market operations and ER movements should be transactions-oriented and not purely speculative in nature. India has set up its own clearing house for dollar–rupee transactions with the concurrence of the Federal Reserve System, United States. The official assessment is that the current ER regime in India has worked well and there is really no need for adopting some alternative ER system such as allowing rupee to appreciate freely, that is, non-intervention by the RBI, or the aggressive reduction by the RBI in the degree of appreciation of the rupee, or RBI should intervene to bring about calculated volatility in ER.

21.7.6 Determinants of Exchange Rate

The determination of ER under the fixed exchange rate system is apparently relatively simple; it is determined by the government and CB which may use certain methods for fixing it. They adjust official demand and supply for currencies to ensure that the ER stays at or near the rate fixed or chosen by them. Under the flexible exchange rate system, the equilibrium spot exchange rate, like any other market price, is determined by the equality of market demand for and supply of currencies generated on trade, investments (assets), hedging, arbitrage and speculative accounts. There are two approaches in this context: the flow approach and the stock approach. Under the former, the demand for and supply of foreign exchange are determined by exports and imports of goods, services and capital between the nations. The flows of all these are reflected in a tableau known as the balance of payments (BOP) accounts of the country. All the credit items (*viz*., exports of goods and services, and purchases by foreigners of a country's financial and real assets, gold and foreign exchange) in BOP give rise to the demand for (supply of) its (foreign) currency, and all the debit items (*viz*., imports of goods and services, and purchases by residents of financial and real assets, gold and foreign exchange abroad) give rise to the supply of (demand for) the country's (foreign) currency. How? For example, while paying for imports which are invoiced in foreign currency, the country's residents must sell domestic currency to obtain the needed foreign currency. Similarly, when imports are invoiced in domestic currency, its foreign recipients must sell it to obtain foreign currency.

From behind BOP, the major factors which influence the ER are (a) growth in GDP, (b) inflation, (c) interest rates, (d) foreign debt, (e) terms of trade, (f) rates of profit, (g) money supply, (h) country risk, (i) expectations about the future values of these variables, and (j) the expected exchange rate. It is very important to realise that only the relative changes in these factors at home *vis-a-vis* foreign countries affect the ER. Let us elaborate.

The law of one price and parity conditions is the basis of nominal ER determination. The former states that in the absence of market imperfections and transactions costs, the exchange-rate-adjusted prices of identical tradeable goods and financial assets, respectively, must be equal in all the countries due to the existence of arbitrage in markets. Following this law, the Purchasing Power Parity Theory (PPPT) posits that the exchange rate between the home currency and any foreign currency will change such as to reflect the relative changes in the price levels in the two countries. The exchange rate change during a given period should equal the inflation differential between the two countries in the same period. For example, a higher rate of inflation in India than in the United States would lead to a depreciation of the rupee and an appreciation of the dollar. If the rates of inflation in India and the United States are 10 and 5 percent, respectively, the rupee value of dollar would rise (dollar would appreciate) by 5 percent.

Although the ER generally behaves in accordance with the PPPT in the long run, deviations from the PPPT do occur in the short run. These deviations give rise to changes in the real exchange rate (to be defined in the next section). If changes in the nominal exchange rate are fully offset by the changes in relative prices in two countries, the real exchange rate remains unchanged.

The exchange rate is also affected by the differential in both interest rates and profit rates in two countries. A rise in either or both of them in, say, India in relation to either or both of them in, say, the United States will induce Indian as well as American investors to switch from dollar-denominated to rupee-denominated securities and investments, which will result in the appreciation of the rupee and the depreciation of the dollar.

Similarly, if the excess of money supply over money demand in, say, India is greater than a similar excess in, say, the United States, the rupee would tend to depreciate and dollar would tend to appreciate. Further, an improvement in the terms of trade (prices of a country's exports relative to those of its imports) of a given country would shift the demand curve for its currency to the right, which would lead to the appreciation of its currency. Finally, the currencies of the countries with lower (higher) political and economic risk (stability) would have higher values than those of the countries with higher (lower) risk (stability). Apart from the current supply and demand flows on the FEM, the ER is influenced by expectations about future ER movements, which, in turn, are influenced by expectations about the future changes in the factors just mentioned.

Some authors have stressed the role of stocks of relevant macro-variables in determining the ER. Their approaches are known as the monetary approach and the portfolio balance approach. The monetary approach emphasises the links between the monetary aggregate, GNP, price level and exchange rate. For example, it posits that the higher rate of growth of real GNP would lead to an appreciation of the currency of the country experiencing such a growth. The portfolio balance approach states that the bonds in different countries are not perfect substitutes for each other. Therefore, the changes in preferences for bonds of one country over another, or different changes in bond supplies in different countries, would affect the exchange rate. At present, capital flows, which are new huge and speculative, have emerged as important determinant of ER movements on a day-to-day basis as against trade deficits and economic growth in earlier times. In the short run, temporary imbalances in supply and demand and the extent of intervention by the central bank significantly affect the ER.

21.7.7 Objectives of Exchange Rate Policy in India

(i) To ensure that economic fundamentals are reflected in the external value of the rupee.

(ii) To reduce excess volatility in exchange rates, and to ensure that the market correction of overvalued or undervalued exchange rate is orderly and calibrated.

(iii) To help maintain an adequate level of foreign exchange reserves.

(iv) To help eliminate market constraints in the way of development of a healthy FEM.

In the early phase of liberalisation, the rupee was devalued against major currencies by about 17–19 percent in two stages in July 1991 in order to tackle the BOP crisis. Some people have argued that this policy led to an improvement in the BOP, increase in foreign exchange reserves (FERs) and the stabilisation of the ER. Others think that this is not true because the ER remained stable only during March 1993 to October 1995, after which the rupee became volatile. There have been frequent turmoils in the FEM and bouts of depreciation and appreciation in different periods requiring heavy RBI intervention, which has been discussed further in this chapter, have unwittingly contributed to the destabilisation of domestic money and financial markets. It is ironical that the 'stabilisation programme' has destabilised both the FEM and the domestic financial markets. The surplus on the capital account and the increase in FERs after 1993 are not good indicators of the success of the policy because these 'improvements' have occurred through external borrowings and inflows of other types of foreign capital rather than through the positive trade balance. The adverse consequences of the foreign capital flows will be discussed in the next chapter.

21.8 GLOBAL AND INDIAN FOREIGN EXCHANGE MARKET ACTIVITY AND TRENDS IN EXCHANGE RATES

LO 4

Explain global and Indian foreign exchange market activity and trends in exchange rates

The 2013 Triennial Survey shows a significant increase in global FX market activity to $5.3 trillion per day in 2013, up from $3.3 trillion in 2010 (Table 21.1). With growth in global FX turnover of about 35 percent at current exchange rates, the 2013 survey results continue the trend of strong turnover growth evidenced in past Triennial Surveys. FX turnover computed at constant exchange rates grew roughly by the same magnitude. The growth in global FX market activity between 2010 and 2013 outpaced the 19 percent rise from 2007 to 2010 reported in the prior survey, but falls short of the record 72 percent increase (at current exchange rates) between 2004 and 2007.

Table 21.1 Global foreign exchange market turnover

(Daily average in April, in billions of US dollars)

	1998	*2001*	*2004*	*2007*	*2010*	*2013*
Foreign exchange instruments	1527	1239	1934	3324	3971	5345
Spot transaction	568	386	631	1005	1488	2046
Outright forward	128	130	209	362	475	680
Foreign exchange swaps	734	656	954	1714	1759	2228
Currency swaps	10	7	21	31	43	54
Options and other products	87	60	119	212	207	337
Memo:						
Total on April 2013 exchange rates	1718	1500	2036	3376	3969	5345
Exchange-traded derivatives	11	12	26	80	155	160

Source: BIS Quarterly review, various issues, BIS Triennial Central Bank Survey Foreign Exchange Turnover in April 2013.

The growth of foreign exchange trading was driven by financial institutions other than reporting dealers and non-financial customers (Table 21.2). Smaller banks (not participating in the survey as reporting dealers) accounted for 24 percent, institutional investors such as pension funds and insurance companies accounted for 11 percent, and hedge funds and proprietary trading firms accounted for another 11 percent of turnover (BIS, 2013)[2]. Foreign exchange trading has become more locally concentrated since 2010, reversing the trend of the surveys since 1998 (Table 21.2). The share of cross-border FX transactions fell considerably, from 65 percent in 2010 to 58 percent in 2013—the lowest level since the 2001 survey. The decrease in the share of cross-border deals is also evident in other OTC markets, such as the market for interest rate derivatives, but does not necessarily mean that trading activity has become less international. The increasing concentration of FX trading in large financial centres documented below suggests that a rising proportion of trading takes place between counterparties located in these centres, although they could be headquartered elsewhere. From

[2]BIS Triennial Central Bank Survey, Foreign Exchange Turnover in April 2013.

Table 21.2 Foreign exchange market turnover by counterparty

(Daily average percentage share)

Items	*1998*	*2001*	*2004*	*2007*	*2010*	*2013*
With reporting dealers	63.0	58.1	52.6	41.9	38.9	38.7
With other financial institutions	19.6	27.9	32.8	40.3	47.7	52.6
With non-financial customer	17.4	14.0	14.3	17.8	13.4	8.7
Local	45.7	42.4	38.4	38.3	35.1	42.3
Cross border	54.2	57.5	61.2	61.7	64.9	57.7

Source: BIS Quarterly review, various issues and BIS Triennial Central Bank Survey Foreign exchange turnover in April 2013.

the Table 21.3, it is evident that the foreign market is highly dominated by US dollar followed by euro, Japanese yen and pound sterling. Indian rupee has accounted for only 1 percent in the year 2013, which has increased from 0.2 percent in the year 2001. The Japanese yen stood out as the major currency that saw the most substantial jump in trading activity, whereas the role of the euro as an international currency declined over the period. The Mexican peso and the Chinese renminbi saw the most significant rise in market share among major emerging market currencies.

Table 21.3 Foreign exchange turnover by currency

(Percentage to total)

Currency	*2001*	*2004*	*2007*	*2010*	*2013*
US dollar	90.4	88.7	86.3	84.9	87.0
Euro	37.7	37.2	37.0	39.1	33.4
Japanese yen	22.7	20.3	16.5	19.0	23.0
Pound sterling	13.3	16.9	15.0	12.9	11.8
Australian dollar	4.2	5.5	6.7	7.6	8.6
Canadian dollar	4.5	4.2	4.2	5.3	4.6
Mexico peso	0.8	1.1	1.3	1.3	2.5
Singapore dollar	0.9	1.0	1.2	1.4	1.4
Korean won	0.7	1.2	1.1	1.5	1.2
Russian rouble	0.4	0.7	0.8	0.9	1.6
Indian rupee	**0.2**	**0.3**	**0.7**	**1.0**	**1.0**
Chinese renminbi	0.0	0.1	0.5	0.9	2.2
Brazilian real	0.4	0.2	0.4	0.7	1.1

Source: BIS Quarterly review, various issues and BIS Triennial Central Bank Survey Foreign Exchange turnover in April 2013.

Foreign exchange market activity has become ever more concentrated in some specific countries (Table 21.4). The majority of global foreign exchange trading in 2013 has occurred via the intermediation of dealers' sales desks in five countries: the United Kingdom (41%), the United States (19%), Singapore (5.7%), Japan (5.6%) and Hong Kong SAR (4.1%). The share of centres in global FX trading has further risen since the last survey. While the top five financial centres in 2010 (which included Switzerland and excluded Hong Kong)

Table 21.4 Percentage share of daily averages of global foreign exchange market turnover by countries

Country	*1998*	*2001*	*2004*	*2007*	*2010*	*2013*
Australia	2.3	3.2	4.1	4.1	3.8	2.7
Brazil	0.2	0.3	0.1	0.1	0.3	0.3
Canada	1.8	2.6	2.3	1.5	1.2	1.0
China	–	–	0.0	0.2	0.4	0.7
Denmark	1.3	1.4	1.6	2.1	2.4	1.5
France	3.7	2.9	2.6	3.0	3.0	2.8
Germany	4.7	5.4	4.6	2.4	2.2	1.7
Hong Kong SAR	3.8	4.0	4.1	4.2	4.7	4.1
India	0.1	0.2	0.3	0.9	0.5	0.5
Japan	7.0	9.0	8.0	5.8	6.2	5.6
Netherlands	2.0	1.8	2.0	0.6	0.4	1.7
Singapore	6.9	6.1	5.1	5.6	5.3	5.7
Switzerland	4.4	4.5	3.3	5.9	4.9	3.2
The United Kingdom	32.6	31.8	32.0	34.6	36.8	40.9
The United States	18.3	16.0	19.1	17.4	17.9	18.9

Source: BIS Quarterly review, various issues and BIS Triennial Central Bank Survey Foreign Exchange turnover in April 2013

accounted for roughly 71 percent of global foreign exchange trading (Table 21.4), the share of the top five global FX trading centres moved up by 4 percentage points to 75 percent in 2013. The United Kingdom, the United States and Singapore expanded their share the most, with turnover growth of 47, 40 and 44 percent, respectively. Singapore overtook Japan as the world's third major FX trading centre in 2013. By contrast, trading activity fell by 13 percent in Switzerland and by 5 percent in Australia. Foreign exchange market activity in India has been only 0.5 percent of the total share, which has come down from 0.9 percent in the year 2007.

Tables 21.5 and 21.6 reveal that the rupee's performance over the years also has been equally sad. Like its internal value, the external value of the rupee also declined continuously and drastically since independence. A look at the entire period since 1993 when India moved towards market-determined exchange rates reveals that the Indian rupee has generally depreciated against the dollar during the last 22 years, except during the years 2003–2004, 2005–2006 and 2007–2008 when rupee appreciated on account of general dollar weakness against major currencies. For the period as a whole, 1993–1994 to 2013–2014, the Indian rupee depreciated against dollar by about 15.5 percent on an annual average basis. Rupee has depreciated against other currencies also during this period except some specific years. The exchange rate of rupee versus dollar has also been highly fluctuating in the year 2014–2015 and the volatility of exchange rate has come down slightly in comparison to the previous year.

Table 21.5 Changes in rupee exchange rates (annual averages)

Year	*SDR*	*US dollar*	*Pound sterling*	*Deutsche mark*	*Yen*
September 1949	—	3.31	—	—	—
	—	4.76	—	—	—
June 1966	—	4.76	13.33	—	—
	—	7.58	21.0	—	—
1970–1971	7.5	7.57	18.0	—	—
1975–1976	10.17	8.38	18.61	3.40	2.8
1980–1981	10.10	8.04	18.42	4.02	3.8
1985–1986	12.92	12.23	16.85	4.56	5.6
28 June 1991	27.85	21.04	34.36	11.74	15.2
1 July 1991	30.34	23.12	37.48	12.77	16.8
2 July 1991	33.89	25.95	41.59	14.16	18.7
1991–1992	33.43	24.47	42.51	14.62	18.5
1992–1993	37.14	30.65	51.69	19.59	24.6
2001–2002	60.21	47.69	68.32	42.18	38.2
2002–2003	64.13	48.40	74.82	48.09	39.7
2003–2004	65.68	45.95	77.73	53.98	41.67
2004–2005	66.92	44.93	82.86	56.51	40.81
2005–2006	64.48	44.27	79.04	53.91	38.01
2006–2007	66.67	45.28	85.72	58.11	37.03
2007–2008	63.27	41.34	82.72	56.60	35.13
2008–2009	68.64	43.50	80.13	63.74	42.30
2009–2010	74.58	48.40	75.72	67.39	51.81
2010–2011	69.75	45.72	70.69	60.66	52.16
2011–2012	73.64	46.67	74.77	64.87	58.62
2012–2013	81.78	53.43	84.69	68.67	67.02
2013–2014	89.06	58.59	91.77	77.89	60.07

Source: Handbook of Statistics on Indian Economy

Table 21.6 Movements of Indian rupee–US dollar exchange rate 1993–1994 to 2014–2015

Year	*Range (₹ per US$)*	*Average exchange rate (₹ per US$)*	*Appreciation/ Depreciation (%)*	*Standard deviation*
1993–1994	31.21–31.49	31.37	–0.10	—
1999–2000	42.44–43.42	43.33	–3.00	0.9
2003–2004	43.45–47.46	45.95	5.06	0.72
2004–2005	43.36–46.46	44.93	2.22	1.03
2005–2006	43.30–46.33	44.28	1.45	1.79

(*Contd.*)

2006–2007	43.30–46.97	45.28	–2.26	0.89
2007–2008	39.27–43.15	40.24	11.12	0.84
2008–2009	39.89–52.06	45.91	–14.09	3.57
2009–2010	44.94–50.53	47.42	–3.27	1.34
2010–2011	44.03–47.57	45.59	3.85	0.89
2011–2012	43.95–54.24	47.95	–5.17	3.04
2012–2013	50.56–57.22	54.45	–13.57	1.25
2013–2014	53.74–68.36	60.49	–11.10	3.08
2014–2015	58.43–63.75	61.15	–1.08	1.19

Source: Handbook of Statistics on Indian Economy, RBI (2015)

The changes in the effective exchange rates as given in Table 21.7 also show that the NEER has declined sharply and the REER has not remained stable during 1975–1976 to 1995–1996. In spite of a secular decline in the external values of the rupee, the trade and current accounts of BOP have remained in deficit secularly. In terms of real effective exchange rates (REER), the REER appreciated by about 2 percent, during 2005–2006 and it has depreciated during the period 2006–2007 to 2013–2014 except in the year 2010–2011. It appears that exchange rate changes, on the whole, are not much effective in correcting the BOP disequilibria. The historical evidence from abroad also shows that massive exchange rate variations (nominal and real) have occurred since the onset of floating exchange rates in 1972, and yet appreciating countries seem to have become relatively stronger and depreciating countries relatively weaker.[3]

Table 21.7 Indices of REER and NEER of the Indian rupee

(Annual Average: 2004–2005 = 100)

Year	*Export-based weight*				*Trade-based weights*			
	REER	*% Change*	*NEER*	*% Change*	*REER*	*% Change*	*NEER*	*% Change*
1975–1976	109.17		113.43		106.17		112.19	
1976–1977	64.51	–40.91	67.02	–40.92	62.73	–40.91	66.28	–40.92
1980–1981	63.80	–1.09	71.16	6.18	61.67	–1.69	70.01	5.63
1985–1986	58.81	–7.83	65.84	–7.47	58.01	–5.95	66.67	–4.78
1990–1991	44.08	–25.05	44.24	–32.81	44.62	–23.08	45.48	–31.78
1993–1994	101.73	130.79	113.11	155.69	99.91	123.91	114.53	151.83
1994–1995	106.69	4.88	111.05	–1.82	104.23	4.32	113.29	–1.09
1995–1996	101.83	–4.56	102.86	–7.37	98.10	–5.88	104.84	–7.45
1996–1997	100.66	–1.15	100.70	–2.10	96.74	–1.39	102.24	–2.48
1997–1998	104.85	4.16	104.03	3.30	100.68	4.07	105.42	3.10
1998–1999	95.97	–8.47	102.18	–1.77	92.96	–7.67	101.99	–3.25
1999–2000	96.93	1.00	102.27	0.09	95.90	3.17	104.25	2.21
2000–2001	100.38	3.56	101.93	–0.33	100.90	5.21	105.53	1.23

(*Contd.*)

[3]Thirwall, A P, 'What is Wrong with Balance of Payments Adjustments Theory?', *The Royal Bank of Scotland Review*, March 1988, pp 3–8.

2001–2002	100.30	–0.08	100.76	–1.15	100.77	–0.13	104.89	–0.61
2002–2003	97.65	–2.64	98.42	–2.32	98.09	–2.66	102.07	–2.69
2003–2004	100.78	3.21	99.41	1.01	99.47	1.41	99.81	–2.22
2004–2005	100.00	–0.78	100.00	0.59	100.00	0.53	100.00	0.20
2005–2006	102.28	2.28	103.12	3.12	102.26	2.26	102.91	2.91
2006–2007	99.02	–3.18	98.93	–4.07	98.34	–3.83	98.37	–4.41
2007–2008	109.77	10.85	118.07	19.36	107.95	9.77	118.81	20.77
2008–2009	103.75	–5.48	110.18	–6.69	101.67	–5.82	110.50	–6.99
2009–2010	103.53	–0.22	102.43	–7.03	101.06	–0.60	103.34	–6.48
2010–2011	115.73	11.78	107.23	4.68	111.63	10.46	107.40	3.92
2011–2012	116.45	0.62	103.03	–3.91	111.51	–0.11	102.41	–4.65
2012–2013	110.58	–5.04	92.21	–10.51	105.55	–5.35	91.38	–10.77
2013–2014	108.88	–1.54	85.43	–7.35	104.41	–1.08	84.92	–7.07

Source: Handbook of Statistics on Indian Economy, Various issues.

21.9 ISSUES IN FOREIGN EXCHANGE MARKET

21.9.1 Central Bank Intervention in FEM

LO 5

Describe the issues in foreign exchange market

Under the Bretton Woods system of fixed exchange rates, interventions were used frequently to maintain the exchange rate within the prescribed margins. When the Bretton Woods system broke down in 1971, major industrial countries discontinued pegging their currencies to the US dollar, bringing in an era of floating exchange rates. In principle, freely floating exchange rates would rule out intervention by central banks. The central banks have, however, often intervened for a variety of reasons:

- to influence trend movements in the exchange rates because they perceive long-run equilibrium values to be different from actual values
- to maintain export competitiveness;
- to manage volatility to reduce risks in financial markets
- to protect the currency from speculative attack and crisis

In this context, Jalan (2003) has pointed out that intervention by most central banks in foreign exchange markets has become necessary and is primarily because of the importance of capital flows in determining exchange rate movements as against trade balances and economic growth, which were important in the earlier days. In recent times, there has been a large increase in international capital movements. In emerging market economies, particularly, these capital flows are very volatile, and largely sentiment-driven, exposing financial markets to large risks. In order to reduce the risks, authorities intervene to curb volatility. Secondly, unlike trade flows, capital flows in 'gross' terms, which affect exchange rate, can be several times higher than 'net' flows on any day. Therefore, herding becomes unavoidable. Theoretically intervention can be categorised into *sterilised* and *non-sterilised. Sterilised intervention occurs when the purchase or sale of foreign currency is offset by a corresponding sale or purchase of domestic government debt to eliminate the effects on domestic money supply. Non-sterilised intervention occurs when the authorities purchase or sell*

foreign exchange, normally against their own currency, without such offsetting actions. Sterilisation might be successful if the capital inflow is temporary and the demand for government securities is perfectly elastic. There are differing effects of sterilised and non-sterilised intervention on the net foreign assets (NFA) and net domestic assets (NDA) of the central bank and on money supply (M) (Table 21.8).

Table 21.8 Effects of foreign exchange intervention

Intervention	*Effects on NFA*	*Effects on NDA*	*Effects on M*
Non-sterilised foreign exchange			
Intervention (Purchase)	+	0	+
Sterilised foreign exchange			
Intervention (Purchase)	+	–	0
Non-sterilised foreign exchange			
Intervention (Sale)	–	0	–
Sterilised foreign exchange			
Intervention (Sale)	–	+	0

Note: *+: positive impact, –: negative impact, 0: no impact, NFA: net foreign assets, NDA: net domestic assets, M: money supply*

There is near agreement that non-sterilised intervention directly influences the exchange rate through the monetary channel. Any purchase of foreign exchange (i.e., intervention) if left unsterilised will impact the monetary base (rises), which, in turn, induces changes in the broader monetary aggregates, interest rates, real demand for goods and assets and ultimately the exchange rate (depreciates). In so far as sterilised intervention is concerned, the proponents of monetary approach claim that it is ineffective. The literature, however, identifies three possible channels through which even sterilised intervention would work: (a) portfolio balance channel under which domestic and foreign bonds are assumed to be imperfect substitutes, and intervention, even though sterilised, impacts exchange rate by changing the relative supplies of bonds; (b) signalling channel where sterilised purchase of foreign currency will lead to a depreciation of the exchange rate if the foreign currency purchase is assumed to signal a more expansionary domestic monetary policy and *vice versa*; and (c) more recently, the noise-trading channel, according to which a central bank can use sterilised interventions to induce noise traders to buy or sell currency (Kortian, 1995). Even if an intervention has only a temporary effect, it can still lead to noise traders assuming that the trend has been broken and induce investors to take positions in line with the central bank's intentions.

Recognising the fact that non-sterilised intervention significantly impacts exchange rates, most studies on central bank intervention have attempted to examine whether sterilised intervention has had a quantitatively significant effect on the exchange rate, that is, an effect that is predictable, sizeable and lasting. It has also been observed that while empirical evidence on the effectiveness of central bank intervention is available in large numbers for some specific developed countries, the evidence on foreign exchange intervention in developing countries including India is weak. Empirical evidence in the Indian case, however, suggests that in the present day of managed float regime, intervention can serve as a potent instrument in containing the magnitude of exchange rate volatility of the rupee even though the degree of influence may not be strong (Pattanaik and Sahoo, 2001). There is some evidence of co-movement in demand–supply mismatch proxied by the difference between the purchase and sale transactions in the merchant segment of the spot market and

intervention by the Reserve Bank. A positive correlation of 0.7 is also found in the case of demand–supply mismatch and net RBI purchases (RBI, RCF, 2005–2006).

The Reserve Bank of India (RBI) very often intervenes in the foreign exchange market to stabilise the value of rupee against foreign currencies. The intervention by the RBI in the foreign exchange market could be either passive (whereby it engages off-market deals) or active (whereby it purchases and sells dollars).The RBI has the authority to enter into foreign exchange transactions both on its own account and on behalf of the government. However, it does not deal in foreign exchange directly with the public; it does so through the authorised dealers. Intervention is the sale and purchase of foreign currencies in the foreign exchange market. The authorised dealers were expected to buy from or sell currencies to the RBI only after exhausting all avenues for meeting their needs and unloading currencies on the domestic market. The exporters were required to surrender the foreign exchange that they could not unload on the domestic market to the RBI, and they could not use foreign currencies for dealings on the international markets, except insofar as such dealings were required to cover their currency position arising out of genuine merchant transactions. The forward purchases or sales of foreign currencies against rupees with foreign banks were prohibited. The guiding principles of the foreign exchange market were as follows: (a) all the foreign exchange transactions with the RBI and among the dealers must be against genuine trade transactions, (b) foreign exchange transactions must not lead to speculation, (c) the market must meet its own needs before approaching the RBI, and (d) currency positions should be either square or near square at the end of each day.

Before the introduction of new economic policy under the Foreign Exchange Control System (FECS), the government had assumed a monopoly of exchange transactions, that is, all foreign exchange required for payment to foreigners was to be bought from the government; it also regulated the transfer of monetary and other assets owned or acquired by its residents in foreign countries. The government dictated the price at which it bought and sold foreign exchange, as well as, the amount of, and the purposes for which foreign exchange was made available. India had used Exchange Control to utilise limited foreign exchange resources according to the scheme of priorities. The Exchange Control was first imposed under the Defence of India Rules in September 1939 which was later placed on a statutory basis by enacting Foreign Exchange Regulation Act (FERA), 1947. This Act was replaced by a more comprehensive, amended and expanded legislation, namely, FERA, 1973 which came into force on 1 January, 1974. Since the inception of the Exchange Control, the RBI was empowered to prescribe the rates at which the authorised dealers could undertake foreign exchange business. The Bank exercised this power indirectly through the Exchange Banks' Association till 1958 and through Foreign Exchange Dealers Association of India (FEDAI) since 1958. The FEDAI fixed and published exchange rates in pound sterling in consultation with the bank for the banks' transactions. The RBI stipulated that banks must follow these rates. The banks were free to quote their own rates for other currencies as long as they were worked out on the basis of market conditions within the framework of guidelines which were issued by the FEDAI from time to time.

Earlier the RBI used to establish the day's buying and selling rate of the rupee in terms of pound sterling at the beginning of the day. In order to maintain the ruling exchange value of the rupee, the bank was obliged to buy and sell foreign exchange against rupee on demand without limit at fixed rates. Until 1947, this responsibility involved readiness to buy and sell pound sterling at fixed rates; after 1947, it has meant readiness to buy and sell at fixed rates any foreign currency instead of pound sterling. In practice, however, the bank did not fix buying and selling rate for many years in any other foreign currency than the pound sterling because the latter was an intervention currency. The dollar purchases were started by RBI from 9 October, 1972 and dollar

sales from 2 February, 1987. Deutsche mark purchases were started from 4 March, 1974 and Japanese yen purchases from 27 May, 1974. With the recommendation of Rangarajan Committee in 1993, exchange rate of rupee was made market-determined. During the period of liberalisation and in the era of market-determined exchange rate system RBI intervenes in the foreign exchange market time to time to stabilise the exchange rate and to save the foreign exchange market from various problems raised in the international market. Most of the time, the monetary authorities in many countries use interest rate as a policy instrument to contain the excess volatility and to maintain the exchange rate at its desirable level. A depreciation of exchange rate calls for an increase in interest rate and appreciation of exchange rate calls for a decrease in interest rates. The bank Rate, repo (repurchase agreement) rate and reverse repo rate have also been used by the monetary authorities to contain the excessive volatility in the foreign exchange market. For example, the external value of the rupee in terms of dollar was found to be under pressure in a few episodes during the second half of the 1990s which can be attributable to a number of factors like East Asian and Russian currency crises (contagion effect), border conflict, rise in oil prices, political instability, and so on. During those situations, high interest rate policy was followed to contain excess volatility in the foreign exchange market. The call money rate was allowed to increase to 34.83 percent in November 1995, 28.75 percent in March 1996 and again 28.75 percent in January 1998. After restoration of normal condition in the foreign exchange market, the call rate was brought back to its normal level. It has been found that the call money rate and net intervention were negatively and significantly related to the exchange rate in India during June 1995 to March 2003. Like this RBI has taken many policy measures to stabilise the foreign exchange market in India.

Table 21.9 shows that the volume of sales and purchases of foreign currencies by the RBI has been much higher during the 1990s than before indicating that the abandonment of the fixed exchange rate system has resulted in greater upward and downward pressures on the value of the rupee, and consequently, a greater need for CB intervention. The RBI intervention has been both for preventing depreciation or devaluation (when sales have been greater than purchases) and appreciation (when purchases have been greater than sales) of the rupee. The Reserve Bank undertook intervention in both spot and forward segment and liquidated its forward

Table 21.9 Reserve Bank's intervention in the foreign exchange market (US$ bIllion)

US dollar				
Year	*Purchase*	*Sale*	*Net*	*Outstanding forward sales /purchase*
1975–1976	0.71	—	—	—
1980–1981	0.71	—	—	—
1991–1992	12.81	7.7	4.48	—
1992–1993	40.67	41.07	–0.4	—
2000–2001	28.2	25.8	2.4	–1.3
2005–2006	15.2	7.1	8.1	0
2010–2011	2.45	0.76	1.69	1.97
2011–2012	16.65	22.00	–5.35	–8.99
2012–2013	12.64	16.22	–3.58	–147.49
2013–2014	52.39	43.00	9.39	–216.12

Source: Reserve Bank of India, Handbook of Statistics of the Indian Economy.

liabilities. Capital movements have rendered exchange rates significantly more volatile than before. Large capital inflows have made the central bank more active in the foreign exchange market, forcing the Reserve Bank to release rupees for buying dollars. An analysis of the movement of exchange rate and net purchases of the Reserve Bank shows that the intervention operation does not necessarily influence so much the level of rupee. Empirical analysis, however, reveals that while FII investments have contributed towards increasing volatility, intervention by the Reserve Bank has been effective in reducing volatility in the Indian foreign exchange market. Intervention by the Reserve Bank to neutralise the impact of excess foreign exchange inflows resulted in the increase in the foreign currency assets (FCA) continuously. In order to offset the effect of increase in FCA on monetary base, the Reserve Bank has been continuously mopping up the excess liquidity from the system through open market operations. The CB intervention in India has often been of a sterilisation nature. It has also been impinging on the domestic liquidity quite sharply. The net sales of foreign exchange by the RBI have sometimes led to the withdrawal of liquidity from the money market and the shooting up of call rates. The net purchases have had the opposite effect. Thus, the RBI intervention has resulted in linking up the FEM with the domestic financial markets, and in unwittingly transmitting the volatility in the former to the latter.

21.9.2 Forward Premia and Foreign Exchange Rate

The forward exchange market in India is active up to 1-year with concentration up to 6 months. The link between the forward premia and interest rate differential works through leads and lags. With the opening up of the capital account, the forward premia is getting aligned with the interest rate differential. Free movements in capital account, a large, deep, and liquid money market, and a well-defined, well-integrated, consistent yield curve are necessary for the development of forward market in foreign exchange. The forward exchange rate is the rate at which economic agents agree today to exchange currencies at some specified time in the future. The forward contracts are on 1 month, 3 months, 6 months, 9 months, and 1 year basis. There are three types of participants in the forward exchange market. They are hedgers, arbitragers and speculators. Hedgers are those who enter the forward exchange market to protect themselves against the exchange rate risk. But whether hedging the exchange rate risk due to forward contract is favourable or not depends on the spot exchange rate at the specified time period. Arbitrageurs are those who want to make a riskless profit because of the discrepancies between interest rate differentials and forward premium or discount. Speculators are those who want to make a profit by accepting exchange rate risk. They engage in the forward exchange market because they believe that the future actual spot rate corresponding to the data of the quoted forward exchange rate will be different from the quoted forward rate. In this way, they equalise the expected change in exchange rate to the forward premium or discount on foreign currency. For example, if the expected rate of depreciation is greater than the forward premium, the speculators will buy the foreign currency, which will force the forward rate to go up until it equals with expected rate of depreciation. The opposite process will work if the expected exchange rate depreciation is less than forward premium. Thus, risk-neutral speculator will ensure that expected change in depreciation is equal to the forward premium.

A currency is said to be at forward premium, if the forward exchange rate for that currency represents an appreciation for that currency compared with the spot exchange rate. On the other hand, a currency is said to be at a forward discount, if the forward exchange rate for that currency represents depreciation for that currency compared with the spot exchange rate. To illustrate, let us assume that the spot exchange rate is

₹45.00/$1. If forward rate at some specified time (say 3 months) is higher than ₹45, then we can say that there is a premium on dollar. On the other hand, if the forward rate is less than ₹45, then there is a discount on dollar.

The forward premium or discount is explained as a percentage of spot exchange rate, that is,

Forward premium/discount = $(E_{t+1} - S_t)/S_t$

where E_{t+1} = Forward exchange rate at time period $t + 1$

S_t = Spot exchange rate at time period t

The Reserve Bank of India has been publishing data on forward premia for three maturities namely,1 month, 3 month and 6 month since 1993. The forward exchange rate can be calculated with the help of spot exchange rate and forward premium/discount. For instance, the forward exchange rate in time period t can be calculated as follows:

$$FER_t = SER_t + [SER_t \times FP/100]$$

where FER = Forward exchange rate in time period t

SER = Spot exchange rate in time period t

FP = forward premia

The denominator of the component FP/100 depends on the maturity of the forward premium. It would be 100, 200, 400 and 1200 for 1 year, 6 months, 3 months and 1 month, respectively. The calculated annual average forward exchange rates for 1 month, 3 months and 6 months maturities during 1996–2014 have been presented in Table 21.10.

Table 21.10 Forward premia, forward exchange rate, spot exchange rate in India

(Annual average)

Year	*Forward premia*			*Spot rate*	*Calculated forward exchange rate*		
	1 month 2.01	*3 months*	*6 months*		*1 month*	*3 months*	*6 months*
1996	12.14	12.41	12.59	35.42	35.78	36.52	37.65
2000	3.76	3.69	3.64	44.94	45.08	45.35	45.76
2005	1.60	1.41	1.25	44.27	44.33	44.43	44.55
2006	2.01	1.81	1.64	45.28	45.36	45.48	45.65
2007	3.31	3.06	2.85	41.34	41.45	41.66	41.93
2008	4.01	3.00	2.40	43.50	43.65	43.83	44.02
2009	3.27	3.01	2.74	48.40	48.53	48.76	49.06
2010	5.02	4.77	4.32	45.72	45.91	46.27	46.71
2011	6.75	6.13	5.79	46.67	46.93	47.39	48.02
2012	8.02	7.28	6.62	53.43	53.79	54.40	55.20
2013	8.50	8.03	7.59	58.59	59.01	59.77	60.81
2014	8.55	8.36	8.22	61.14	61.58	62.42	63.65

Source: Handbook of Statistics on Indian Economy, Various issues.

21.9.3 Co-movement of Domestic and Foreign Interest Rates and the Exchange Rate

The RBI and banks and others participate in both the spot and forward markets. The market is characterised sometimes by the excess demand for foreign exchange in merchant and interbank segments which hardens the forward premia and it also makes the RBI to sell the currency in the forward market. It is natural that the RBI intervention is in the opposite direction to the excess demand or supply in the market, and then only it can help to stabilise the market. One of the ways in which the efficiency of the foreign exchange management is assessed is to study the co-movement of domestic and foreign interest rates and the exchange rate. Two theories or conditions which we used for this purpose are Covered Interest Parity (CIP) condition, and the Uncovered Interest Parity (UIP) condition. The CIP states that the forward premium or forward discount, that is, forward exchange rate reflects (or equals) the differential between the domestic and foreign interest rates. The UIP states that the expected change in the exchange rate reflects (or equals) the interest rate differential mentioned above. The CIP and UIP imply that forward premia or discounts are an unbiased predictor of the future spot exchange rate.

Several channels have resulted in growing integration of money and forex markets—importers and exporters influence the forward markets through getting/giving credit to overseas parties. Similarly, the decision to draw bills is influenced by spot market expectations and domestic interest rates. The freedom to avail of pre/post-shipment credit in forex and switch between rupee and foreign currency credit has also helped to increase integration between money and forex markets. Further, when banks are allowed to grant foreign currency loans out of FCNR liabilities, integration is enhanced. Similarly, when banks swap/unswap FCNR deposits, greater integration is achieved. The introduction of rupee interest rates derivatives also will help greater market integration. Allowing the ADs to borrow from their overseas offices/correspondents and to invest funds in overseas money market also has induced integration. Further, the step taken by the RBI to allow banks to lend in forex to companies in India without linking to export or import financing has also helped integration. As a result of this step, companies as well as exporters can substitute rupee credit for forex credit depending on the cost and exchange risk. If liquidity is considerable and call rates are easy, banks may deploy funds either in forex or government or money or repo market which may affect forward premia. The integration between the domestic and overseas markets works through the forward market. On the whole, due to developments just mentioned, the government securities market, capital market, money market, and forex market have become relatively more integrated in the sense that new participants in these markets move (relatively more freely and to a relatively extent) from one market to another. The integration of forex and domestic markets depend upon the foreign currency liabilities and assets banks can maintain and the extent or degree to which they are swapped into rupees and *vice versa*.

21.9.4 Currency Convertibility (CC)

The convertibility of the Indian rupee has been a subject of great interest and excited discussions in recent years. The submission of the Report[4] of the Committee on Capital Account Convertibility (CCAC), at the end of May 1997 has given a fresh impetus to them. At the time of submission of the said report, the situation in India was mixed in the sense that there was no full current account convertibility (CURAC) and there was capital account convertibility (CAC) in certain respects. ADs could supply, without clearance from the RBI, foreign exchange for current account transactions only up to a limit, but there were virtually no restrictions on capital inflows such as investments by FIIs. The CCAC thought that the time was now apposite to initiate

[4]RBI, Report of the Committee on Capital Account Convertibility (Tarapore Committee), Mumbai, 1997.

a move towards CAC, and it recommended that the implementation of CAC be spread over a 3-year period, that is, 1997–2000. It also recommended the liberalisation of both capital inflows and outflows. In its view, fiscal consolidation, a mandated inflation target and strengthening of the financial system were the crucial pre-conditions for CAC in India. Following the recommendations of the Tarapore Committee, the whole host of capital account transactions have been liberalised or deregulated in the recent past. It has been argued that for most transactions which are required for business and personal convenience, the rupee is practically fully convertible. Further, in cases where specific permission is required for transactions above a high monetary ceiling, the permission is generally given quite easily. And, the authorities have declared that they would continue to pursue this deregulation policy further. Is the committee right in its thinking? The following brief discussion on the meaning, prerequisites and possible dangers of CC in general should help to impart clarity to public thinking on this subject.

Meaning and General Features of CC

The CC does not have just one meaning. Its meaning has undergone changes over the years. In the nineteenth century, a currency was deemed convertible only if non-residents could obtain gold at a fixed price with their currency balances. Under the Bretton Woods system, it implied an official obligation to transform domestic currency balances of non-residents into the currency demanded by them, at the parity to be maintained within the IMF framework. According to one 'working' definition, 'currency is convertible if domestic nationals wishing to buy foreign goods and services … can freely sell domestic for foreign currency … at a single but possibly variable foreign exchange rate covering all current transactions inclusive of normal trade credit, whereas foreigners (non-residents) with balances in domestic currency arising from current transactions can sell them at the same foreign exchange rate or purchase domestic goods freely at prevailing domestic currency prices'.[5] As per the IMF's Article VIII, a currency is convertible if it is convertible for current account transactions alone. It may be noted that according to R I Mackinnon and IMF, to acquire a status of convertible currency, CAC is not essential. Defining CAC, the CCAC said, 'CAC refers to the freedom to convert local financial assets into foreign financial assets and *vice versa* at market-determined rates of exchange. It is associated with changes of ownership in foreign/domestic financial assets and liabilities and embodies the creation and liquidation of claims on, or by, the rest of the world'.[6] The Tarapore Committee (1997) in its report defines '*CAC as the freedom to convert local financial assets into foreign financial assets and vice versa at market-determined rates of exchange*'. In other words, CAC implies complete mobility of capital across the countries. The rationale behind the FCAC is efficient allocation of global capital which not only equalises the rates of return of capital across the countries but also increases the level of output and equitable distribution of level of income.

Definition of CC

By bringing together all the major aspects, we can formulate a comprehensive definition of CC as follows: CC means instituting exchange arrangements whereby residents, non-residents and foreigners can exchange (transform) freely (without limit) domestic currency for (into) any foreign currency or gold and *vice versa* at a pre-determined (fixed) or a variable but legal (not unofficial or parallel) market rate of exchange for the purpose of transactions on trade, invisible, current and capital accounts. When many countries introduce CC, the concept of anyone or two currencies being the reserve currencies vanishes; in theory, all convertible currencies are reserves currencies or the international means of payments.

[5]Mackinnon, R I, *Money in International Exchange*, Oxford University Press, Oxford, 1979, p. 6.
6RBI, Report of the Committee on Capital Account Convertibility (Tarapore Committee), Mumbai, 1997, P. 4.

Making a given currency convertible involves removing most of the exchange and trade controls, and allowing free competitive price mechanism to work in international trade and finance. Specifically, it requires (a) freeing the ER regime; (b) eliminating import licensing, custom duties, import taxes and tariffs, advance import deposits, export incentives, and multiple exchange rates; (c) removing restrictions on international services transactions, earning, availability, use, retention and holding of foreign exchange at home and abroad, and on international capital movements as well as buying and selling of foreign exchange, and (d) giving freedom to remit abroad profits, dividends and any other legitimate income in foreign currencies.

The case for CC is the same as the case for free competition or free trade. It is said to (a) stimulate economy through effective international competition, (b) align domestic and world prices better, (c) offer greater freedom of choice between domestic and foreign goods, services, investments, real and financial assets and capital, and (d) make more foreign capital available to the countries. In the past, for attaining the status of convertibility, the currency had to be convertible into gold. The dollar used to be called a convertible currency because it could be converted so. Such a condition no longer exists now. Similarly, unlike in the past, convertibility does not have to be at a fixed rate of exchange now. At the same time, floating rate system is not a must for CC; it does not require and is independent of any particular ER system. A view that convertibility is a corollary of the flexible ER system is not convincing; what can perhaps be stated is that the unrestricted floating of ER is feasible when the currency is convertible. Further, although it is said above that the CC implies progress towards free trade, it has often existed with trade and exchange restrictions. For example, the convertibility at the fixed ER can be maintained only with such restrictions and financial discipline on the governments. In the sterling area, a number of currencies were linked by the fixed exchange rates when they were convertible into each other, and the fixed rates were maintained with the help of trade restrictions.

Convertibility: Full or Partial

Convertibility can be '*full*' or '*partial*'. The comprehensive definition of convertibility given above is the definition of full convertibility. The partial convertibility would mean that the freedom to buy or sell currency is only limited in amount; or it is only on any one or two BOP accounts; or it is only for the foreigners. According to some people, full convertibility means removing trade and exchange controls completely, and shifting away from the fixed, managed, pegged ER systems towards the flexible or floating ER system.

The intention of or announcement by a given country to make its currency convertible is not sufficient to make it really or effectively so, unless it comes to enjoy wide and easy acceptability as a means of payment and store of value by the international community. This point is well reflected in the experts' and authorities' view that the adequacy of reserves is one of the pre-conditions for making a currency convertible. The CCAC also has held such a view. In theory, any convertible currency itself is a reserves currency, and the country of that currency should not need other reserves currencies if the convertibility is effective or real. The convertibility is essentially widening the general acceptability of the currency from domestic to international population. This is not in the hands of the country itself; for that foreigners must have a confidence in the economy of the country in question. More than 45 out of 128 IMF member countries, some of them quite wealthy, have made their currencies convertible formally, but many of them are still *de facto* non-convertible.

Pre-requisites

For introducing convertibility and for making it effective, the following pre-conditions need to be met: (i) The ER must be realistic. (ii) The country should enjoy low inflation rate and internal financial stability.

(iii) Foreign exchange reserves should be large in practice. (iv) The trading partners should open up their trade and payments systems. (v) Debt levels, particularly, external debt level, should be low. (vi) Fiscal and monetary austerity, prudence, consolidation and drastic reduction in fiscal deficit should be achieved. (vii) Labour market reforms, including unemployment insurance, job retraining, and wage discipline should be achieved.

Dangers of CC

A considerable amount of empirical evidence from a large number of countries shows that the theoretical advantages of the CC are significantly outweighed by its adverse economic, social, political, and cultural consequences, particularly, during the transition period. They are as follows: (i) It increases the risk of capital flights both ways, which increases the volatility in exchange rates and financial markets. This risk is very real in practice due to the fact that 90 percent of transactions in FEMs are not related to trade. (ii) It tends to increase unemployment, and reduce output and wages. (iii) It may accentuate inflationary pressures because foreign goods become available at higher prices. (iv) It can result in the flooding of the domestic markets with imports, particularly non-essential ones. (v) It increases the misuse of foreign exchange not only for luxury and leisure industry but also for smuggling of goods, drugs, arms and for other nefarious activities. (vi) Unlimited access to short-term external borrowings and giving unrestricted freedom to domestic residents to convert their domestic bank deposits and idle assets in response to market developments or exchange rate expectations would cause extreme domestic financial vulnerability as the experience of the Asian crisis has taught us.

It should be realised that free mobility of capital has adversely affected many countries such as Mexico, East Asia, Russia, and so on. However strong might be the economic, fundamentals of developing countries, free flow of global capital inevitably sow the seeds of future financial crises. Excessive inflows of capital results in exchange rate appreciation and, thereby, affect the competitiveness of the host country in the international goods market on the one hand, and widens the trade deficit by increasing imports on the other. Central bank's intervention in order to avoid these adverse effects causes the problems in the management of these reserves and affects the independent monetary policy operation. FCAC may encourage arbitrage operation. It is so because banks, non-banks financial institutions, individual borrowers would prefer to borrow global capital from the capital surplus country at a cheaper cost which not only increases the external debt burden of the country, but also would encourage the functioning of the 'black economy' and financial instability because of the heavy investment in physical assets and financial assets in stock market, respectively. FCAC very often provides wrong signal to the international investors about the host country's economic fundamentals. Since the international investors are very much concerned about their profit maximisation rather than productive investment, they mobilise their funds for higher returns which may result in moral hazard and adverse selection problems and, thereby, destabilise the financial system and cause a great loss to the host country.

It must also not be forgotten that the CC has remained largely non-existent in most of the countries, indicating severe difficulties in making it work successfully. It has been observed that international financial crises and wars, which are quite unpredictable, make the CC unsustainable. As mentioned earlier, only about 50 percent of the IMF member countries have introduced CC so far, and in many of them it exists only *de jure* and not *de facto*. The dollar problem which had developed some years back illustrates that free convertibility of the rupee is not a feasible proposition indeed. The convertibility of the dollar had appeared to be advantageous in the United States, but as the budget deficits increased, the dollar glut reduced the acceptability of the dollar. Among the countries which have made their currencies convertible, only the United States and Germany have

granted convertibility to non-residents on both current and capital accounts, others practise convertibility mostly on current account. Then why should India alone be in a hurry to introduce CAC? Taking a convenient, liberal and complacent view of the experiences of other countries, and thereby introducing CAC immediately would harm the country. A relevant question which also can be legitimately asked is when the kind of free market mechanism expected under the CC is not available in domestic markets, how can it be expected to be feasible in the international markets?

Full Capital Account Convertibility in India

Tarapore Committee on CAC had suggested some pre-conditions such as reduction in gross fiscal deficit as percentage of GDP from 4.5 in 1997–1998 to 4.0 in 1998–1999 and further to 3.5 in 1999–2000, mandated rate of inflation on an average 3–5 percent for the 3-year period 1997–1998 to 1999–2000, fully deregulated interest rate structure by 1997–1998 and reduction of NPAs as percentage of total advances to 12 percent by 1997–1998, 9 percent by 1998–1999 and 5 percent by 1999–2000 for full capital account convertibility. But none of these pre-conditions have been met in its specified time period. The performance of these indicators has not been satisfactory in recent years also. For example, gross fiscal deficit as a percentage of gross domestic products stood at 4.5 percent during 2012–2013. The annual inflation rate was 4.6 percent during 1997–1998 to 2012–2013. The NPA of scheduled commercial banks as a percentage to total advance has not declined to the expectation level. Interest rates have not been deregulated completely. Bank deposit rates, provident fund rate, and all long-term interest rates are still administered by the government. But the issue of full capital account convertibility (FCAC) once again has become a matter of active discussion in India due to the accretion of large FERs discussed in the previous subsection. Following recommendations are given for full capital account convertibility in India in 2006.

1. The spot and forward markets should be liberalised and extended to all participants, removing the constraint on past performance/underlying exposures.
2. Bank margins on foreign exchange transactions of smaller customers need to be reduced by separating foreign exchange business from lending transactions and introducing an electronic trading platform.
3. The Reserve Bank's intervention in the foreign exchange market should be through the anonymous order-matching system.
4. To nurture interest rate parity in forward markets, more flexibility may be provided to banks to borrow and lend overseas both on short-term and long-term, depending upon the strength of their balance sheet.
5. Currency futures may be introduced subject to risks being contained through proper trading mechanism, structure of contracts, and regulatory environment.
6. The existing guaranteed settlement platform of CCIL needs to be extended to the forwards market.
7. The banking sector should be allowed to hedge currency swaps by buying and selling without any monetary limits.
8. A monitoring exchange rate band of ± 5.0 percent around the neutral real effective exchange rate (REER) may be considered and the REER should incorporate services to the extent possible.
9. As an operative rule, if the current account deficit persists beyond 3 percent of GDP, the exchange rate policy should be reviewed.

21.9.5 Forex Reserve Management

The main objectives in managing a stock of reserves for any developing country, including India, are preserving their long-term value in terms of purchasing power over goods and services, and minimising risk and volatility in returns. After the East Asian crises of 1997, India has followed a policy to build higher levels of FER that take into account not only anticipated current account deficits but also liquidity at risk (LAR) arising from unanticipated capital movements. Accordingly, the primary objectives of maintaining FER in India are safety and liquidity; maximising returns is considered secondary. In India, reserves are held for precautionary and transaction motives to provide confidence to the markets, both domestic and external, that foreign obligation can always be met.

In any emerging economy, the desirable size of reserves can be explained mainly by four factors: (i) the size of the economy, (ii) its vulnerability to the current and capital accounts, (iii) exchange rate flexibility, and (iv) opportunity cost. In recent years, some additional factors have emerged for developing economies such as India. First, with increasing financial integration in global markets, movement of capital is swift and FER are considered as a first defence in a crisis—a self-insurance—reflecting a lack of confidence in the current international financial architecture. Second, the reserve accumulation in India could be a reflection of abundant international liquidity in the global economy resulting from easing of monetary policy in developed countries, especially the United States. Therefore, this could be a short-term phenomenon, which might reverse swiftly with a rise in interest rates in the developed countries.

The foreign exchange reserves (FERs) have increased substantially in the recent past and they are now among one of the largest in the world. The economic theory regards the volume of a country's FERs as an indicator of its health, and it holds that 'foreign exchange barrier' is a crucial impediment to the growth of developing countries. From this point of view, the increase in FERs to an unprecedentedly high level in the recent past should be regarded as a desirable development. However, the observers are not agreed on this point. As per one view, as just stated, the high level of FERs in India reflects the success of reforms, India's ability to meet financial obligations and maintain the country's monetary stability, India's ability to import more goods, her ability to absorb the shocks and uncertainties in the world economy and her ability to cope up with crisis and capital flight. High level of FERs means greater availability of liquidity and confidence, higher sovereign rating, greater backing for domestic currency and finer terms on debt.

The other view points out the likely adverse implications of very high level of FERs. First, the maintenance or holding of excessive FERs is costly. The cost of holding FERs is the opportunity cost of investing them in productive activities. Second, the accumulation of FERs augments the domestic money supply, and, in order to avoid excessive growth in money supply, the RBI has to conduct sterilisation operations by selling the government securities. Third, high FERs have increased the interest burden of the economy, because a large part of them are in the form of NRI deposits. Fourth, FERs have increased also because of FIIs inflows of funds. NRI deposits and FIIs flows are vulnerable and susceptible to capital flight. Fifth, at least a part of FERs represent arbitrage funds from the NRIs in America, Europe, and Gulf countries. Sixth, the increase in FER has been due to push rather than pull factor, that is, it is not so much due to the strength of the Indian economy as the disappointing state of the world economy. Seventh, the reserves have not been built up due to favourable balance of trade or surplus on the current account. Eighth, a part of increase in FERs has been due to the revaluation of reserves on account of depreciation of US dollar against other major currencies.

Some of these points have been denied by the official sources. They have argued that the cost of FERs is really a non-issue because the bulk of the accrual of FERs has been on account of non-debt creating inflows such as FDI, portfolio investments and remittances, and the rates of interest paid on NRI deposits and multilateral loans have been lower than international interest rates. Similarly, it has been argued that the arbitrage *per se* is unlikely to have been a primary factor in influencing remittances or investment decisions by the NRIs and foreign entities. This is so because there is a minimum period of 1 year for holding deposits in India by the NRIs, and the rate of interest on such deposits is subject to a ceiling rate of 2.5 percent over LIBOR. Finally, FII investments in debt funds are subject to an overall ceiling of $1 billion in the aggregate.

Tables 21.11–21.14 give useful information on the level and composition of FERs in India, and also certain indicators in the form of ratios which tell us whether FERs are excessive or not. Three types of assets—SDRs, gold and foreign currency—comprise FERs. Among these, foreign currency accounts for almost more than 90 percent of FERs. Table 21.11 shows a phenomenal increase in FERs. India's foreign exchange reserves have grown significantly since 1991. The reserves, which stood at ₹114.16 billion at end-March 1991 increased gradually to ₹21,376.47 billion. It may be mentioned that forex reserves data prior to 2002–2003 do not include *Reserve Tranche Position* (RTP) in IMF. Under its financial transaction plan IMF designated India as a creditor in February 2003 with a contribution of SDR 5 million. Tables 21.11 and 21.12 detail the major sources of accretion to foreign exchange reserves during the period from March 1991 to March 2015. The increase in foreign exchange reserves in the recent period has been on account of capital and other inflows. Major sources of increase in foreign exchange reserves for the year 2014–2015 have been (a) external commercial borrowings, (b) foreign investment, and (c) short-term credit. The accretion of foreign exchange reserves needs to be seen in the light of total external liabilities of the country. India's international investment position (IIP), which is a summary record of the stock of country's external financial assets and liabilities, is available as of December 2014 (Table 21.13).

Table 21.11 Level and composition of foreign Exchange reserves in India

(₹ in Billion)

Year	*SDR*	*Gold*	*Foreign currency assets*	*Reserve tranche position*	*Total*
1950–1951	—	1.18	9.11	—	10.29
1960–1961	—	1.18	1.86	—	3.04
1969–1970	0.92	1.83	5.46	—	8.21
1970–1971	1.12	1.83	4.38	—	7.33
1980–1981	4.97	2.26	48.22	—	55.45
1990–1991	2.00	68.28	43.88	—	114.16
1995–1996	2.80	156.58	584.46	—	743.84
2000–2001	0.11	127.11	1844.82	—	1972.04
2001–2002	0.50	148.68	2491.18	—	2640.36
2002–2003	0.19	167.85	3414.76	31.90	3614.70
2003–2004	0.10	182.16	4662.15	56.88	4901.29
2004–2005	0.20	196.86	5931.21	62.89	6191.16
2005–2006	0.12	256.74	6473.27	33.74	6763.87

(*Contd.*)

2006–2007	0.08	295.73	8365.97	20.44	8682.22
2007–2008	0.74	401.24	11960.23	17.44	12379.65
2008–2009	0.06	487.93	12300.66	50.00	12838.65
2009–2010	225.96	811.88	11496.50	62.31	12596.65
2010–2011	204.01	1025.72	12248.83	131.58	13610.13
2011–2012	228.60	1382.50	13305.11	145.11	15061.30
2012–2013	240.20	1397.40	14126.30	125.10	15884.20
2013–2014	268.30	1301.67	16609.10	110.20	18283.80
2014–2015	249.44	1191.60	19854.58	80.85	21376.47

Source: Handbook of Statistics on Indian Economy, Various Issues.

Table 22.12 Sources of accretion to foreign exchange reserves since 1991

(US$ billion)

Itemits	*2007–2008*	*2008–2009*	*2009–2010*	*2010–2011*	*2011–2012*	*2012–2013*	*2013–2014*
Foreign investment	90.36	320.88	30.3	29.1	17.1	18.6	7.8
NRI deposits	10.73	28.64	2.9	2.2	3.9	9.4	13.7
External assistance	8.69	5.71	1.0	3.0	0.6	0.0	0.1
External commercial borrowing	33.41	7.45	0.7	6.0	8.4	1.7	2.5
Other items in capital accounts	–14.13	–56.92	–10.2	–10.7	–9.7	–5.4	–6.2
Valuation change	–208.88	197.60	19.8	6.8	0.9	0.1	–4.1
Total	–233.87	292.93	29.3	13.8	6.6	0.4	–14.8

Source: RBI various publications.

Table 21.13 International investment position in India

(US$ million)

	Item	*December 2014*
A.	**Assets**	
1.	Direct investment abroad	129,578
2.	Portfolio investment	1430
3.	Other investments	38,799
4.	Foreign Exchange Reserves	320,649
5.	Total foreign assets	490,456
B.	**Liabilities**	
1.	Direct investment in India	252,331
2.	Portfolio investment	211,772
3.	Other investments	382,857
4.	Total foreign liabilities	846,961
5.	Net foreign Liabilities	356,505

Source: RBI Bulletin, Various Issues.

Table 21.14 Indicators of adequacy of foreign exchange reserves (FER) in India`

Year	*Import cover of Reserves (Months)*	*FER to Reserve Money*	*FER to Broad Money*	*FER to External Debt*	*FER to Short-term Debt*	*FER to GDP*
1990–1991	2.5	13.0	4.3	7.0	68.3	—
1995–1996	6.0	38.3	12.4	23.1	430.8	6.3
2000–2001	8.6	65.0	15.0	41.8	1165.4	11.5
2005–2006	11.6	118.03	24.78	119.8	1743.76	18.96
2006–2007	12.4	122	26.22	1663.64	128.46	24.36
2007–2008	15	133.34	30.89	698.68	139.35	31.77
2008–2009	10.3	129.94	26.95	510.24	109.77	30.87
2009–2010	11.2	108.99	22.49	531.88	106.74	27.89
2010–2011	9.6	98.84	20.94	469.07	99.62	27.66
2011–2012	7.1	105.53	20.46	376.56	81.67	28.70
2012–2013	7.0	104.85	18.93	302.02	71.38	28.97
2013–2014	7.8	105.91	19.21	331.84	68.15	31.84
2014–2015	8.9	110.85	20.27	403.28	71.76	—

Source: RBI, Various Publications.

Are Foreign Exchange Reserves Adequate?

Adequacy of reserves has emerged as an important parameter in gauging its ability to absorb external shocks. With the changing profile of capital flows, the traditional approach of assessing reserve adequacy in terms of import cover has been broadened to include a number of parameters which take into account the size, composition, and risk profiles of various types of capital flows as well as the types of external shocks to which the economy is vulnerable. The high level committee on balance of payments, which was chaired by Dr. C. Rangarajan, erstwhile Governor of Reserve Bank of India, had suggested that, while determining the adequacy of reserves, due attention should be paid to payment obligations, in addition to the traditional measure of import cover of 3–4 months. In 1997, the report of committee on capital account convertibility under the chairmanship of Shri S S Tarapore suggested four alternative measures of adequacy of reserves which, in addition to trade-based indicators, also included money-based and debt-based indicators. Similar views have been held by the committee on fuller capital account convertibility (Chairman: Shri S S Tarapore, July 2006).

In the recent period, assessment of reserve adequacy has been influenced by the introduction of new measures. One such measure requires that the usable foreign exchange reserves should exceed scheduled amortisation of foreign currency debts (assuming no rollovers) during the following year. The other one is based on a 'liquidity at risk' rule that takes into account the foreseeable risks that a country could face. This approach requires that a country's foreign exchange liquidity position could be calculated under a range of possible outcomes for relevant financial variables, such as, exchange rates, commodity prices, credit spreads and so on. Reserve Bank of India has done exercises based on intuition and risk models in order to estimate 'liquidity at risk (LAR)' of the reserves.

The traditional trade-based indicator of reserve adequacy, *viz.,* import cover of reserves, which increased from 2.5 months of imports to 12.4 months of imports in the year 2006–2007 declined to 8.9 months of imports at end-March 2015. The ratio of foreign exchange reserves to short-term debt increased from 68.3 percent at end-March 1991 to 1743.76 percent at end-March 2006 and again declined to 71.76 percent in the year 2014–2015. The other ratios such as FER to reserve money, FER to broad money, FER to total external debt and FER to GDP have increased slightly in the year 2013–2014 as compared to the year 2014–2015 (Table 21.14).

How are the Foreign Exchange Reserves Managed in India?

The Reserve Bank of India (RBI), in consultation with the Government of India, currently manages FER. As the objectives of reserve management are *liquidity* and *safety*, attention is paid to the currency composition and duration of investment, so that a significant proportion can be converted into cash at short notice. The essential framework for investment is conservative and is provided by the RBI Act, 1934, which requires that investments be made in foreign government securities (with maturity not exceeding 10 years), and that deposits be placed with other central banks, international commercial banks and the Bank for International Settlement following a multi-currency and multi-market approach.

The conservative strategy adopted in the management of FER has implications for the rate of return on investment. The direct financial return on holdings of foreign currency assets is low, given the low interest rates prevailing in the international markets. However, the low returns on foreign investment have to be compared with the costs involved in reviving international confidence once eroded, and with the benefits of retaining confidence of the domestic and international markets, including that of the credit rating agencies.

Are FER excessively high in India at present? The following norms indicate that they are excessive.

According to the High Level Committee on BOP, which was appointed by the government with C Rangarajan as its Chairman, the level of reserves should be able to buy imports of 3 months. If so, present level of FERs is excessive. Even if we accept the other norm for optimum reserves, namely, 6 months of imports as suggested by some economists, the present FER in India can be regarded to be excessive. The third type of norm is based on the thinking that FER should meet not only imports requirements but also should take into account the volume of short-term debt, servicing of medium-term debt, interest and principal payments on debt. As per this, thinking, the level of FER that can meet imports and capital flow requirements of 1 year is good or desirable. This is known as 'Guidotti rule'. India's FER at present are excessive even in terms of this very liberal norm.

As it will be discussed in greater details in the next chapter, the foreign capital in very large magnitude is neither necessary nor desirable for India. It is so because the voluntary savings in India generated according to the time preference of the economic agents is mostly sufficient for the gross domestic investment and growth. The high real rates of interest promote both financial and total savings and private sector capital formation by facilitating the accumulation of finance necessary for undertaking investments. The cumulative net impact of the real rate of interest on investment is positive because its effect operating through financial intermediation and complementarity outweigh its cost effect. Therefore, any reduction in interest rates affects both savings and investments adversely. The proper utilisation of domestic savings

at appropriate interest rates structure is sufficient to put the Indian economy on a high growth path. For this, co-ordination among economic agents, such as, households, corporates, banks, and the government, which, in turn, depends on confidence and expectation about the future economic activity, is required. In contrast to Arrow–Debrew's model of co-ordination success in a competitive environment, co-ordination failure is very much prevalent in the present uncertain milieu.

21.9.6 Euro and South Asian Currency

Euro is the name of the common official currency (unit) of 12 European countries namely, Germany, France, Italy, Spain, Portugal, The Netherlands, Belgium, Finland, Luxemburg, Ireland, Greece and Austria, which, along with three other countries (Britain, Denmark and Sweden) have formed European Economic and Monetary Union (EMU). It may be noted that the three countries just mentioned are part of EMU but not euro. It was formally introduced on 1 January, 1999. During the period between 1 January, 1999 and 31 December, 2001, the respective national currencies of the above-mentioned 12 countries continued to be legal tender, but their governments issued debt only in euro. On 1 January, 2002, euro notes and coins were introduced and a changeover to euro at retail level began. The respective national currencies of the 12 countries ceased to exist and euro became the sole legal tender in those countries from 1 July, 2002. The euro symbol is €. The conversion rates between euro and the respective national currencies of member countries were irrevocably fixed on the basis of bilateral exchange rates established in May 2002. As a result 1 euro equals (1) 1.958583 German marks, (2) 6.55957 French francs, (3) 1936.27 Italian lira, (4) 166.386 Spanish pesetas, (5) 200.482 Portuguese escudos, (6) 5.94573 Finnish markka, (7) 0.787564 Irish punts, (8) 40.3399 Belgian/Luxembourg francs, (9) 2.20371 Dutch guilders, (10) 13.7603 Austrian schillings, and (11) 340.750 Greek drachmas. The European Central Bank (ECB) was inaugurated on 30 June, 1998, which replaced European Monetary Institute. Its headquarter is in Frankfurt. There is also a 15-nation European Parliament. ECB regulates the issue of euro. Euro is now being traded in all major financial markets, and it has become the second most important international currency after the US dollar, but far ahead of the Japanese yen. Euro is expected to emerge as a rival currency to US dollar.

An idea has recently been mooted to introduce a common South Asian Currency for the SAARC region (India, Sri Lanka, Bhutan, Nepal, Maldives, Bangladesh and Pakistan) also on line with euro. It will take considerable amount of efforts and time to implement this idea.

SUMMARY

- The market in which national monetary units or claims are exchanged for the foreign monetary units is defined as foreign exchange market (FEM). The FEM is not a physical place; it is an informal, electronically linked network of big banks, foreign exchange brokers and dealers whose function is to bring buyers and sellers together.
- The trading in FEM is usually done 24 hours a day by telephones, display monitors, telex and fax machines and the satellite communications network called the Society for Worldwide International Financial Telecommunications (SWIFT).

- Most foreign exchange markets in developing countries are either pure dealer markets or a combination of dealer and auction markets. In the dealer markets, some dealers become market makers and play a central role in the determination of exchange rates in flexible exchange rate regimes. In auction markets, an auctioneer or auction mechanism allocates foreign exchange by matching supply and demand orders.
- The Indian foreign exchange market is a decentralised multiple dealership market comprising two segments—the spot and the derivatives market.
- In the direct interbank market, banks quote buying and selling prices directly to each other and all participating banks are market makers. It has been sometimes characterised as a 'decentralised, continuous, open-bid, double-auction' market. In the indirect market, the banks put orders with brokers who put them on 'books', and try to match purchases and sales orders for different currencies. They charge commission to both the buyers and sellers. This market is characterised as 'quasi-centralised, continuous, limit-book, single-auction' market.
- Players in the Indian market include (a) ADs, mostly banks who are authorised to deal in foreign exchange, (b) foreign exchange brokers who act as intermediaries, and (c) customers—individuals and corporates, who need foreign exchange for their transactions.
- In the Indian foreign exchange market, spot trading takes place on four platforms, *viz*., FX CLEAR of the CCIL set up in August 2003, FX Direct that is a foreign exchange-trading platform launched by IBS Forex (P) Ltd. in 2002 in collaboration with Financial Technologies (India) Ltd., and two other platforms by the Reuters—D2 platform and the Reuters market data system (RMDS) trading platform that have a minimum trading amount limit of US$ 1 million.
- Various kinds of risks faced by the foreign exchange market are settlement risk, market risk, credit risk and operational risk.
- The bid-ask spread in the Indian foreign exchange market has declined overtime.
- The exchange rate (ER) is the price of one country's currency (money) in terms of another country's currency (money).
- In order to obtain a summary measure of changes in the ER of a currency *vis-a-vis* all the other (major) currencies, economists have developed the concepts and measures of the '*Nominal Effective Exchange Rate*' (NEER) and the '*Real Effective Exchange Rate*' (REER).
- The devaluation (revaluation) of a currency refers to a policy-determined decrease (increase) in its official exchange rate or par value relative to another currency.
- Different kinds of exchange rate systems are the fixed, flexible and managed or dirty exchange rates systems.
- The major factors which influence the ER are (a) growth in GDP, (b) inflation, (c) interest rates, (d) foreign debt, (e) terms of trade, (f) rates of profit, (g) money supply, (h) country risk, (i) expectations about the future values of these variables, and (j) the expected exchange rate.
- The majority of global foreign exchange trading in 2013 has occurred via the intermediation of dealers' sales desks in five countries: the United Kingdom (41%), the United States (19%), Singapore (5.7%), Japan (5.6%) and Hong Kong SAR (4.1%).
- Sterilised intervention occurs when the purchase or sale of foreign currency is offset by a corresponding sale or purchase of domestic government debt to eliminate the effects on domestic money supply. Non-sterilised intervention occurs when the authorities purchase or sell foreign exchange, normally against their own currency, without such offsetting actions

- A currency is said to be at forward premium if the forward exchange rate for that currency represents an appreciation for that currency compared with the spot exchange rate. On the other hand, a currency is said to be at a forward discount if the forward exchange rate for that currency represents depreciation for that currency compared with the spot exchange rate.

KEY TERMS

SWIFT
Bid-ask spread
Exchange rate
Forward rate
Nominal effective
Exchange rate
Real effective
Exchange rate
Forward premium
Currency depreciation
Currency devaluation
Currency appreciation
Fixed exchange rate system
Floating exchange rate system
Managed or dirty exchange rate system
Purchasing power parity
Sterilised intervention
Non-sterilised intervention
Forward premia
Currency convertibility

QUESTIONS

1. Define foreign exchange market in terms of its size, characteristics and structure.
2. Highlight the different types of risks the foreign exchange market face and how they are managed.
3. What is exchange rate? What are the factors that determine the exchange rate?
4. What are the objectives of exchange rate policy in India?
5. Write a note on the development of global foreign exchange market.
6. Analyse the trends in exchange rate during the period of liberalisation in India.
7. Explain the impact of foreign exchange intervention on the money supply of the economy.
8. How is the foreign exchange reserves managed in India?
9. Explain the concept of adequacy of foreign exchange reserves.
10. Write the short notes on the following
    (a) Devaluation
    (b) Exchange rate system
    (c) SWIFT
    (d) Foreign exchange trading
    (e) Currency convertibility

Foreign Capital Flows

22 CHAPTER

Learning Objectives

- **LO 1** Identify the uses and determinants of foreign capital
- **LO 2** Know multilateral financial institutions
- **LO 3** List international financial instruments
- **LO 4** Describe the components of foreign capital in India
- **LO 5** Understand the trends in foreign capital inflow
- **LO 6** Review FDI in the retail sector in India
- **LO 7** Discuss the benefits, issues and development of sovereign wealth funds
- **LO 8** Show the drawbacks of foreign capital

22.1 INTRODUCTION

Perceptions and policies with regard to the role of foreign (international) capital (savings) in the process of industrial and overall growth have changed in India since the beginning of economic planning. The first 15–20 years were marked by caution in welcoming the foreign capital. A restrictive and selective approach characterised the next 10–15 years, while increasing relaxation, liberalisation and receptivity was experienced during the 1980s. The period after 1991 can be called the halcyon days of eager welcome, open-door or open-arm policy and an increasing thrust towards international integration and globalisation. The 'beneficial' role of the foreign capital no longer appears to be in doubt now. During the last phase, the government, business and industry and many academics have shown a pitched foreign capital (FC), particularly private foreign capital enthusiasm and optimism; some micro units have now begun to view it as a substitute rather than as a supplementary source of funds. Similarly, many people now think that India can and will receive it in ample measure.

The government has recently introduced a number of policy measures to attract foreign investment; and various organised efforts are being made to convince foreign investors—individual, institutional, and corporate—that India is a good investment risk or a good market place; and that they would be provided all help, facilities, concessions and incentives if they deign to invest in India.

However, foreign capital is of a different genre from domestic capital. Its use involves not only the commercial, financial, and economic considerations but also wider concerns such as systemic volatility, national sovereignty, dependency, international hegemony, covert colonial exploitation, and the ultimate resources drain. It is in this context that this chapter provides the basis for assessing how far, given the ground realities and wider concerns mentioned earlier, India can and should finance its productive activities with foreign savings. The broad objective of this chapter is to describe the role, types (forms), instruments, and determinants of foreign capital, and to analyse its trends, prospects, and problems with special reference to India.

22.2 USES AND DETERMINANTS OF FOREIGN CAPITAL

LO 1
Identify the uses and determinants of foreign capital

In the process of economic development, foreign capital is said to (a) relax the domestic savings constraint, (b) help to overcome the foreign exchange barrier, (c) provide access to the superior technology, superior managerial skills and bigger markets, (d) provide risk-sharing capital financing, (e) furnish the funds needed for the full utilisation of the existing production capacity and, (f) promote efficiency and productivity through international competition.

The major determinants of various forms of foreign capital flows are as follows:

- The imbalances between saving and investment lead to current account gaps. Massive increases in the surpluses of the OPEC countries and Japan, and large current account deficits of the United States have caused the recent surge in capital flows.
- The relative levels of the nominal and real expected rates of return or interest rates, and the risk and uncertainty in respect of the real and financial investments. Like population migration, capital migration can be and has been explained in terms of the 'pull' and 'push factors'. As far as the recent increase in capital flows is concerned, greater weight has to be given to the push factors, particularly the falling interest rates in the United States and some other countries. Empirical evidence has established that aggregate private capital inflows to developing countries have exhibited a strong negative association with the interest rates in the United States.[1]
- The degree of openness of the financial and other markets or the extent of their internationalisation or international integration. The worldwide adoption of the policy of deregulation, liberalisation, stabilisation and structural adjustments; and the dismantling of the trade, exchange, investment, price, ownership, capital flows controls and so on have spurred the recent surge in capital flows.
- The legal and institutional structure which is transparent and easily understood.
- The relative stability of the international value of different currencies, that is, the relative rates of inflation.
- The relative stability of the external value of different currencies, that is, the relative stability of the exchange rates.
- The relative terms of trade of different countries.
- The absorption capacity of the receiving countries.
- The business cycle phases or the growth (economic) prospects in different countries.

[1]Ferandez Arias, E; and Montiel P J, 'The Surge in Capital Inflows to Developing Countries: An Analytical Overview', *The World Bank Economic Review*, January 1996.

- The credit standing or credit rating of nations, which depends, *inter alia*, on political and social stability.
- The requests and the negotiation skills of different countries.
- The extent of the cross-country penetration of the foreign ownership of banks, business firms and security firms.
- Changes in the preferences of the investors for the international diversification of their portfolios.
- The extent of the innovativeness of the markets in respect of designing and supplying a whole range of new financial products.
- Advances in the computer and telecommunication technologies leading to a revolution in the availability of information, and in the working of the payments and transfer mechanism.
- Bandwagon effects resulting from the signalling of the information on fundamentals, or from the speculative bubbles.

22.3 MULTILATERAL FINANCIAL INSTITUTIONS

LO 2
Know multilateral financial institutions

The four well-known multilateral institutions which have vast resources and tremendous influence, and which supply foreign capital for different purposes are (a) the International Bank for Reconstruction and Development (IBRD) widely known as the World Bank (WB) with its three affiliates; (b) the Asian Development Bank (ADB); (c) the International Monetary Fund (IMF); and (d) the Bank for International Settlements (BIS). They are also known as international development banks or non-commercial banks. Both, IMF and IBRD were created at the same time in 1944. While the IMF supplies funds to tide over short-term financial difficulties, the World Bank provides long-term, developmental capital. The IMF membership is a prerequisite for WB membership. In 1994, IMF and WB had 174 and 150 members, respectively. Recently, a New Development Bank (NDB) has been formed by the BRICS countries to provide adequate financial capital for development to the BRICS countries.

World Bank: The WB provides assistance with a view to (a) help in the reconstruction and development of member countries by promoting investment in high quality projects and for productive purposes; (b) promote private foreign investment by providing guarantees or by participating in loans and other investments made by private parties; (c) promote long-term and balanced growth of international trade; and (d) help to bring about a smooth transition from a wartime to a peacetime economy. On the whole, WB assistance is for infrastructural development in the areas such as transportation, urban development, electricity and other energy generation, dams, education, rural development, and so on. The WB provides assistance to governments, public sector units, autonomous bodies, municipalities, and so on in both developed and developing countries. Its loans have to be guaranteed by the respective governments. The maturity of its loans varies from 15 to 20 years, and they are at relatively low rates of interest. In the recent past, the WB has been emphasising on giving loans to help countries to meet Balance of Payment (BOP) difficulties, and it has been using its loans window to make debtor countries to adopt policies of free trade, privatisation, deregulation, liberalisation, and globalisation. Its financial resources are raised through membership contributions or quotas, borrowings from governments and private sources and issuing bonds in capital markets. The WB and its affiliates together are known as World Bank Group of institutions. The affiliates include (a) International Development Agency (IDA); (b) International Financial Corporation (IFC); and (c) Multilateral Investment Guarantee Agency (MIGA).

IDA: One of these affiliates, namely, International Development Association or Agency (IDA) was established in 1960 to provide development assistance particularly to 'poor' countries or to those parties who could not meet the terms of WB loans. Its loans have a maturity up to 50 years and are provided free of cost or at concessional interest; they are 'soft' loans. These loans, however, require government guarantees. The wealthy countries contribute to the resources of the IDA.

IFC: Another affiliate of the WB is the International Finance Corporation (IFC). It was set up in 1956 with a view to provide long-term loans and risk or equity capital to private sector enterprises, and to encourage the flow of foreign private capital to developing countries through the establishment and expansion of capital markets and financial institutions in those countries. The unique feature of the IFC is that it gives assistance for promoting the development of financial markets or the market-oriented financial sectors. It advises governments on the legal, fiscal and regulatory frameworks needed for this purpose. It attracts international investors to the securities markets in host countries by sponsoring, underwriting and distributing the shares of both individual companies and funds that invest in those securities. It does not supply funds to the governments, and it does not require government guarantees. Its capital is provided by its 135 member countries.

MIGA: The third affiliate of the WB namely, Multilateral Investment Guarantee Agency (MIGA) was set up in 1988. It guarantees or provides insurance protection to foreign investors up to 90 percent of an investment against non-commercial risk, currency transfer risk, expropriation risk, risk of war, revolution and civil disturbance and breach of contract risk, for typically a 15-year period. Through its services of this nature, MIGA encourages foreign investors to make long-term commitments in developing countries. It also provides policy and advisory services to the developing countries for creating an attractive investment climate.

ADB: The Asian Development Bank (ADB) provides or guarantees direct loans to private ventures in Asian or Pacific countries. It also helps to develop local capital markets by underwriting the securities issued by private enterprises.

IMF: International Monetary Fund (IMF) was established in 1944 to help countries to abstain from changing their exchange rates for obtaining a trading advantage, by collecting and allocating international liquidity reserves. Its articles of agreement require member countries to promote international monetary co-operation, to facilitate balanced growth of international trade, to promote exchange rate stability, to establish a system of multilateral payments and to create a reserve base. Although the nations are supposed to borrow from the IMF primarily for meeting international reserves requirements, its lending possibilities have been expanded considerably over the years by establishing the following various 'facilities': Standby arrangements (introduced in 1952) enable countries to obtain funds ahead of the need so as to lessen the risk of attack on their currencies. The Compensating Financing Facility (1963) helps countries with temporary inadequate foreign exchange reserves. The Extended Fund Facility (1974) provides loans to countries with structural difficulties that take longer time to be corrected. The Trust Fund (1976) allows IMF to sell its gold and use the proceeds for special development loans. The Supplementary Financing or Witteveen Facility gives stand by credits to countries with temporary difficulties arising from oil price increases. The Buffer Stock Facility grants loans to countries to purchase crucial inventories.

BIS: The BIS is a central bank for central banks. It was set up in 1930. It assists central banks (CBs) in the world to invest monetary reserves, acts as agent or trustee in carrying out international loan agreements, and acts as a forum for international monetary co-operation. Its funds, which are required for lending to central

banks, are placed in the world financial markets as deposits with commercial banks, purchases of short-term negotiable paper, US treasury bills, and so on.

New Development Bank (NDB): New Development Bank, formerly referred to as the *BRICS Development Bank*, is a multilateral development bank established in the year 2015. According to the agreement on the NDB, 'the Bank shall support public or private projects through loans, guarantees, equity participation and other financial instruments'. Moreover, the NDB 'shall co-operate with international organisations and other financial entities, and provide technical assistance for projects to be supported by the Bank. The main objectives of the NDB are (i) to promote infrastructure and sustainable development projects with a significant development impact in member countries, (ii) to establish an extensive network of global partnerships with other multilateral development institutions and national development banks, and (iii) to build a balanced project portfolio giving a proper respect to their geographic location, financing requirements and other factors.

22.4 INTERNATIONAL FINANCIAL INSTRUMENTS

LO 3
List international financial instruments

The foreign capital can be mobilised by issuing a complex variety of financial instruments, *viz*., (a) syndicated or traditional bank loans or euro credits or euro loans; (b) euro deposits or euro currency or euro money; (c) foreign bonds; (d) euro bonds; (e) Fixed Rate Notes (FRNs); (f) Note Issuing Facility (NIF); (g) Euro Commercial Paper (ECP); (h) Euro Certificates of Deposits (ECDs); (i) Euro Equities and (j) Equity-related instruments such as American Depository Receipts (ADRs), Global Depository Receipts (GDRs) and International Depository Receipts (IDRs).

Euro Issues: The word 'euro' in the names of many of these instruments needs to be understood well. In 1950s, the erstwhile Soviet Union held the proceeds of its gold sales in the form of US dollars with banks in the United Kingdom and France but not in the United States because in the days of the Cold War, it did not want to appear to be lending to 'capitalist America', and it was also afraid that its deposits may be confiscated. These deposits came to be known as euro dollars as they were denominated in dollars and were held in Europe. During the 1960s and 1970s, the volume of these deposits and the market in them expanded because the restrictions such as the ceiling on interest rates and higher CRR imposed by the US authorities on domestic banks had led many US banks to accept dollar deposits at their foreign branches in Europe and to invest dollars so obtained in the United States. In the 1970s, the countries under the Organisation of the Petroleum Exporting Countries (OPEC) had accumulated massive BOP surpluses which they also preferred to hold in dollars with the banks in Europe. Finally, the dollar being a widely accepted means of international payments, many European corporations also preferred to keep their surplus dollars with the European banks. Since 1981, non-US residents have been able to conduct dollar business free of US banking regulations at the international banking facilities in the United States itself. Earlier, the market for euro dollars was located primarily in Europe, but now it exists in many other countries.

With the passage of time, the progressive extension or the generalisation of the concept of euro dollars has occurred in the form of euro currency or euro money, and euro instruments or euro assets. Now the currencies have leapt beyond their traditional boundaries so that it is possible to write cheques in French francs against bank accounts in Tokyo; bank accounts in different currencies exist side by side in many financial centres; it has become possible to arrange loans in, say, US dollars in, say, Bonn or Tokyo. All these are called euro

currency deposits and credits; and the markets for them are called euro currency markets. Spearheading the growth of euro currencies was the appearance of euro dollars in the 1950s. Euro dollars are a special case, an example of euro currency; euroyen, euro frank are other euro currencies. Whether the financial instrument is domestic or foreign or euro depends upon the currency in which it is denominated (the currency of issue), the country in which it is issued (the country of issue) and the location of the issuing entity (the nationality of the issuer). Let us try to understand further the terminology involved in this context by studying the meaning and nature of some of the instruments mentioned earlier.

As said above, the euro dollars are deposits which are US-dollar-denominated and held at banks located outside the United States. Here, what matters is the location of the bank, and not the nationality of the bank and the nationality of the deposit holder. A dollar deposit belonging to a US company held with a US bank's subsidiary abroad is still a euro dollar deposit. A bank deposit is counted as a part of euro currency if it is denominated in some currency other than that of the country in which the bank with which it is held is located. As said earlier, euro deposit or euro currency is a generalisation of the euro dollar deposit. Generalising, further, any financial instrument issued or traded in a given country and denominated in the currency other than that of that country is called a euro instrument. Euro deposit is an example of euro instrument.

Euro credits or euro loans are loans by banks in international markets. In the case of syndicated euro credits, a number of banks participate in a loan, each contributing a slice and enabling it to limit its exposure to a single borrower. They have emerged as an important source of external finance for many borrowers, including the corporates. Euro bonds are the bonds that are denominated in the currency other than that of the country in which they are sold or issued. They are a generalisation of the euro dollar bonds which are the US-dollar-dominated bonds sold outside the United States. When euro bonds are denominated in more than one currency, they are called *multicurrency* bonds. They usually give the lenders the right to request repayment in one or two or more currencies. The amount of repayment are often set equal in value at the exchange rates in effect when the bonds are issued. Euro bonds are bearer and unsecured bonds, and they are usually listed on the London or Luxembourg exchange. Their variants or types are euro-callable bonds, euro-convertible bonds, straight- or fixed-rate bonds, floating-rate notes or bonds and equity-linked bonds. The volatility of exchange rates has led to the growing use of a variety of hedging features such as partly paid bonds, warrants to purchase additional bonds, warrants to buy bonds in different currencies and so on.

FRNs Floating Rate Notes (FRNs) and their variants have been important innovations in the euro bonds markets in the recent past. In the case of FRNs, the funds are automatically rolled over every 3–6 months or so at adjusted interest rates; the new rates are typically set at a fixed margin above a mutually agreed interest rate (index) such as the London Interbank Offer Rate (LIBOR). The capped FRNs, mismatch technique FRNs, collared floaters, (with a floor and cap to the interest rate payable), inverse coupon floaters (in which case the applicable rate of interest is expressed as a given number, say, 12 percent, less than the LIBOR) and the perpetual FRNs are some of the variants of this instrument.

Foreign Bonds: Foreign bonds are bonds floated in the domestic market and domestic currency by non-resident entities; they are often referred to as Yankee bonds (USA), Bulldog bonds (UK), Samurai bonds (Japan). They are also bearer and unsecured bonds listed on domestic stock exchanges. They may be subscribed to by the domestic and overseas investors. Foreign Currency Convertible Bonds (FCCBs) are the bonds subscribed to by non-residents in foreign currency; they are equity-linked unsecured debt instruments carrying a fixed interest rate and an option of conversion into a fixed number of equity shares or GDRs of the

issuing company; usually, they have a maturity of 5 years. They are issued with fixed exchange rate clauses, specifying the rates at which they would be converted; interest and principal on them are paid in foreign currency.

Note Issuance Facility (NIF): It is a funding arrangement which combines the features of a syndicated bank loan and an FRN issue. It aims at simultaneously satisfying the investor preference for short-term commitments, and the borrower needs for medium-term funds. The user of NIF obtains medium-term (5–7 years) funding by offering short-term notes called euro notes directly to the investors, and rolling them over repeatedly. In order to ensure the success of the roll over, NIF has also been called as Revolving Underwriting Facility (RUF), or Short-term Note Issuance Facility (SNIF), or Note Purchase Facility (NPF), or Euro note Facility (ENF). The variants of NIF are the Traditional Note Issuance Facility (TNIF) described above, Underwritten Multiple Component Facility (UMCF) and Uncommitted Euro Commercial Paper Facility (UEPF). The UMCF enables the borrower to switch between different markets to take the advantage of the cheapest source of funds, but by paying front and commitment charges. Uncommitted Euro Commercial Paper Facility is not tied to specific back-up lines; it is issued for flexible maturities of any duration from 7 to 365 days. The variants of the strategy for issuing euro notes are sole placing agent, multiple placing agents and tender panel system.

Euro Currency Certificates of Deposits (ECCDs): These are negotiable, bearer receipts for euro currency deposits which could be either fixed-rate or floating-rate deposits. Euro Commercial Papers (ECPs) are euro notes which are not underwritten. The average maturity of ECPs is about 40–50 days, and they are actively traded in the secondary market.

Country Funds, ADRs, IDRs and GDRs Foreign Equity Investment: These can be obtained through country funds, FIIs investment in the domestic stock market, and the primary issues of equity in markets abroad through the sale of straight equity or convertible bonds or bonds with warrants. The straight equity issues are made through American Depository Receipts (ADRs), International Depository Receipts (IDRs) and Global Depository Receipts (GDRs). An **ADR i**s a certificate that represents shares of a foreign stock owned and issued by a US bank. The foreign shares are usually held in custody overseas, but the certificates trade in the United States. Through this system, a large number of foreign-based companies are actively traded on major US equity markets. A **GDR** is a bank certificate issued in more than one country for shares in a foreign company. The shares are held by a foreign branch of an international bank. The shares trade as domestic shares but are offered for sale globally through various bank branches. American Depository Receipts (ADRs) are meant to facilitate public issues and trading in the United States. Global Depository Receipts (GDRs) are issued and traded in the euro market as well as in the United States. While both individual and institutional investors invest in ADRs, only the latter buy GDRs. While ADRs can be converted into shares and back into ADRs, GDRs once converted into shares cannot be converted back into GDRs. The primary and secondary markets in GDRs are mainly in London and Luxembourg, and most of the trading in them is over-the-counter (OTC) trading.

All the depository receipts including GDRs are essentially equity instruments created or issued abroad not by the companies but by the Overseas Depository Banks (ODBs), which are authorised by the companies in, say, India to issue them to non-resident investors against their shares. These shares are physically held by domestic custodian banks nominated or appointed by the ODBs. In the companies' books, the ODBs' names appear as the holders of their shares. The companies' shares correspond to the GDRs in a fixed ratio,

say 1 GDR = 10 shares. The GDRs are bearer and negotiable securities; they can be redeemed at the price of the corresponding shares ruling on the date of redemption. They are traded on international markets. They are denominated, quoted, and traded in any freely convertible currency, mainly in US dollars. The shares underlying GDRs, however, are denominated only in the domestic currency (rupees).

The GDRs can be listed and traded on any of the overseas stock exchanges or OTCEs. They can be purchased, possessed and freely transferred by the non-residents among themselves. The ODBs get the dividends in the local currency from the company, and it distributes them to the holders of GDRs after converting them into dollars (foreign currencies) at the going exchange rate. While the dividends are taxable (at 10 percent at source in India), the capital gains are not taxable. The GDRs are exchangeable with underlying shares either at any time or after the lapse of a particular time period. In India, an investor can cancel and convert GDRs into equity shares without any 'lock-in period', but after a 'cooling period' of 45 days. The exchanged shares can then be traded on the local stock markets. The issue price of GDRs depends upon the market price of the underlying shares at the time of the issue. The services of the underwriters can be used for issuing GDRs. The settlements of trading in GDRs are done through the clearing organisations namely, CEDEL and EUROCLEAR.

Global Depository Receipts facilitate greater awareness and enhanced image of the company in global markets. Their holders do not have the voting rights, and depositories usually relinquish their voting rights. However, once GDRs are cancelled and the underlying shares are released, the persons who come to hold those shares have the voting rights. This is said to be beneficial to the companies. The Indian companies can issue GDRs only as per the guidelines in force at different points of time. The holders of GDRs are entitled to dividends, bonus and right issues, but they cannot sell or pledge or transfer them to domestic residents (in India). The process of cancellation of GDRs involves the following steps: The holder informs the depository about his intention and then cancels the GDRs. The depository then directs the custodian to release underlying shares into the domestic market for sale on behalf of the non-residents. The custodian then releases shares to the counterparty broker who sells them and remits the proceeds to the custodian, who remits them to the depository, who, in turn, remits them to the non-residents.

22.5 COMPONENTS OF FOREIGN CAPITAL IN INDIA

LO 4
Describe the components of foreign capital in India

The capital flows to India have been divided into two broad categories which are: (i) debt creating flows, and (ii) non-debt creating flows. One way of classifying external debt is the two-way scheme based on duration¾long- and short-term. Long-term debt is defined as debt with an original maturity of *more than* 1 year, while short-term debt is defined as debt repayments on demand or with an original maturity of *1 year or less*. Further, the components of long-term external debts include (i) multilateral debt, (ii) bilateral debt, (iii) loans from IMF, (iv) trade/export credit, (v) external commercial borrowings, (vi) NRI deposits, and (vii) rupee debt. The non-debt creating capital inflows are (i) foreign direct investment, and (ii) foreign institutional investment. All these components are defined as follows:

Multilateral Creditors: These are primarily multilateral institutions such as the International Development Association (IDA), International Bank for Reconstruction and Development (IBRD), Asian Development bank (ADB) and so on.

Bilateral Creditors: These are sovereign countries with whom sovereign and non-sovereign entities enter into one-to-one loan arrangements. Some of India's bilateral creditors who extend loans to both sovereign and non-sovereign debtors include Japan, Germany, United States, France, Netherlands, and Russian Federation.

Trade Credits/Export Credits: These refer to loans and credits extended for imports directly by overseas supplier, bank and financial institution to sovereign and non-sovereign entities. Depending on the source of finance, such credits can be either *suppliers' credit* or *buyers' credit*. (i) *Suppliers' Credit*: Such credit is extended by the overseas supplier of goods in the form of deferred payments. (ii) *Buyers' Credit*: Such credit is provided by a bank or financial institution and is generally governed by the Organisation for Economic Co-operation and Development (OECD) consensus terms and carries insurance from export credit agency of the concerned country.

External Commercial Borrowings (ECBs): These include commercial bank loans, securitised instruments (e.g. floating rate notes and fixed rate bonds, non-convertible, optionally convertible or partially convertible preference shares/debentures), buyers' credit, suppliers' credit, Foreign Currency Convertible Bonds (FCCBs), Financial Lease and Foreign Currency Exchangeable Bonds (FCEBs) from multilateral institutions like IFC, ADB, CDC and so on. While the first six forms of borrowing can be availed of both under the automatic and approval routes, FCEBs can be issued only under the approval route. The revised ECB framework (2015) comprises the following three tracks: **Track I:** Medium term foreign denominated ECB with Minimum Average Maturity (MAM) of 3/5 years. **Track II:** Long-term foreign currency denominated ECB with MAM of 10 years. **Track III:** Indian rupee denominated ECB with MAM of 3/5 years. The minimum average maturity for the Track I is 3 years for ECB up to US-dollar 50 million or its equivalent and 5 years for ECB beyond US-dollar 50 million or its equivalent. For Track II, it is 10 years irrespective of the amount. For Track III it is same as Track I.[2]

NRI Deposits: It began in the early 1970s in the form of deposits. Since 1982, they have been encouraged to send capital to India through certain other forms of investment also. The following deposits schemes have been in force during different periods of time:

(i) Foreign Currency (Non-Resident) Account [FCNR(A)]: This scheme was introduced in November 1975; it has been completely withdrawn from August 1994.

(ii) Non-Resident (External) Rupee Account [NR(E)RA]: It was introduced in February 1970 and continues to exist.

(iii) Foreign Currency (Non-Resident) Accounts (Banks)—[FCNR(B)]: It was introduced in May 1993 and continues to be in force.

(iv) Non-Resident (Non-Repatriable) Rupee Deposits [NR(NR)RD]: Introduced in June 1992 and withdrawn from 2006.

(v) Foreign Currency Ordinary-Non-Repatriable (FCON): Introduced in June 1991 and withdrawn in August 1994.

(vi) Foreign Currency (Banks & Other) Deposits [FC(B&O)D]: Withdrawn in 1994 and again started in 2006.

[2]For details please see RBI, External Commercial Borrowings (ECB) Policy—Revised framework, Circular No. 32, November 30, 2015

The features of currently existing different NRI deposit accounts are as follows[3]:

(A) Non-Resident Ordinary Rupee Account (NRO Account)

1. Any person who is a resident outside India may open an NRO account with an authorised dealer or an authorised bank for the purpose of putting through bona fide transaction in rupees.
2. Opening of accounts by individual/entities of Pakistan and of Bangladesh require prior approval of Reserve Bank of India.
3. Non-Resident Ordinary Rupee Accounts may be opened/maintained in the form of current, savings, recurring or fixed deposit accounts.
4. Account should be denominated in Indian rupees.
5. Permissible credits to NRO account are transfers from rupee accounts of non-resident banks, remittances received in permitted currency from outside India through normal banking channels, permitted currency tendered by account holder during his temporary visit to India, legitimate dues in India of the account holder such as current income, rent, dividend, pension, interest, and so on, and sale proceeds of assets including immovable property acquired out of rupee/foreign currency funds or by way of legacy/inheritance.
6. Eligible debits such as all local payments in rupees including payments for investments as specified by the Reserve Bank and remittance outside India of current income such as rent, dividend, pension, interest, and so on, net of applicable taxes, of the account holder.
7. Non-Resident Indians/Persons of Indian Origin (NRIs/PIOs) may remit from the balances held in NRO account an amount not exceeding US-dollar one million per financial year, subject to payment of applicable taxes.
8. The limit of US-dollar 1 million per financial year includes sale proceeds of immovable properties held by NRIs/PIOs.
9. Other than current income and the limit of US dollar 1 Million per financial year applicable to NRIs/PIOs, balances in NRO accounts cannot be repatriated without the prior approval of the RBI.
10. The accounts may be held jointly with residents and/or with non-resident Indian. The NRO account holder may opt for nomination facility.
11. NRO (current/savings) account can also be opened by a foreign national of non-Indian origin visiting India, with funds remitted from outside India through banking channel or by sale of foreign exchange brought by him to India.
12. Loans to non-resident account holders and to third parties may be granted in rupees by authorised dealer/bank against the security of fixed deposits subject to certain terms and conditions.

(B) Non-Resident (External) Rupee Account (NRE Account)

1. An NRE's account may be in the form of savings, current, recurring or fixed deposit accounts (with maturity of minimum one year).
2. Non-Resident Indians may be permitted to open NRE account with their resident close relatives (relative as defined in Section 6 of the Companies Act, 1956) on 'former or survivor' basis. The resident

[3]RBI, Facilities for Non Resident Indians (NRIs) and Persons of Indian Origin (PIOs), September 2014

close relative shall be eligible to operate the account as a power of attorney holder in accordance with the extant instructions during the life time of the NRI/PIO account holder.

3. Account will be maintained in Indian rupees.
4. Balances held in the NRE account are freely repatriable.
5. Accrued interest income and balances held in NRE accounts are exempted from income tax and wealth tax, respectively.
6. Authorised dealers/authorised banks may at their discretion/commercial judgement allow for a period of not more than 2 weeks, over drawings in NRE savings bank accounts, up to a limit of ₹50,000 subject to the condition that such over drawings together with the interest payable thereon are cleared/repaid within a period of 2 weeks, out of inward remittances through normal banking channels or by transfer of funds from other NRE/FCNR accounts.
7. Permissible credits to NRE account are inward remittance to India in permitted currency, proceeds of account payee cheques, demand drafts/bankers' cheques, issued against encashment of foreign currency, where the instruments issued to the NRE account holder are supported by encashment certificate issued by AD Category-I/Category-II, transfers from other NRE/FCNR accounts, sale proceeds of FDI investments, interest accruing on the funds held in such accounts, interest on government securities/dividends on units of mutual funds purchased by debit to the NRE/FCNR(B) account of the holder, certain types of refunds and so on.
8. Eligible debits are local disbursements, transfer to other NRE/FCNR accounts of person eligible to open such accounts, remittance outside India, investments in shares/securities/commercial paper of an Indian company and so on.
9. Loans can be extended against security of funds held in NRE account either to the depositors or third parties without any ceiling subject to usual margin requirements.
10. Such accounts can be operated through power of attorney in favour of residents for the limited purpose of withdrawal of local payments or remittances through normal banking channels to the account holder himself.

(C) Foreign Currency Non Resident (Bank) Account: FCNR (B) Account

1. Non-Resident Indians are eligible to open and maintain these accounts.
2. Foreign Currency Non Resident (B) Accounts are only in the form of term deposits of 1–5 years.
3. All debits/credits permissible in respect of NRE accounts, including credit of sale proceeds of FDI investments, are permissible in FCNR (B) accounts also.
4. Account can be held in any freely convertible currency.
5. Loans can be extended against security of funds held in FCNR (B) deposit either to the depositors or third parties without any ceiling subject to usual margin requirements.
6. The interest rates are stipulated by the Department of Banking Operations and Development and Reserve Bank of India. With effect from 1 March, 2014, in respect of FCNR (B) deposits of maturities, 1 year to less than 3 years, interest shall be paid within the ceiling rate of LIBOR/SWAP rates plus 200 basis points for the respective currency/corresponding maturity. For FCNR (B) deposits with maturity of 3–5 years, interest shall be paid within the ceiling rate of LIBOR/SWAP rates plus 300 basis points.

On floating rate deposits, interest shall be paid within the ceiling of SWAP rates for the respective currency/maturity plus 200 bps/300 bps, as the case may be. For floating rate deposits, the interest reset period shall be 6 months.

7. When an account holder becomes a person resident in India, deposits may be allowed to continue till maturity at the contracted rate of interest, if so desired by him.
8. Terms and conditions as applicable to NRE accounts in respect of joint accounts, repatriation of funds, opening account during temporary visit, operation by power of attorney, loans/overdrafts against security of funds held in accounts and so on shall apply *mutatis mutandis* to FCNR (B). Non-Resident Indians can open joint account with a resident close relative (relative as defined in Section 6 of the Companies Act, 1956) on former or survivor basis. The resident close relative will be eligible to operate the account as a power of attorney holder in accordance with extant instructions during the life time of the NRI/PIO account holder.

The investment avenue for NRIs comprises Direct Investment Schemes (DISs) and a Portfolio Investment Scheme (PIS). Portfolio investment can be undertaken on repatriation or non-repatriation basis. Direct Investment Schemes include (a) 40 percent equity investment in new issues of new/existing companies in the manufacturing sector on repatriation basis; (b) 100 percent equity investment in industries establishing export houses, hotels and tourism-related industries on repatriation basis; (c) 100 percent equity participation in housing and real estate development; (d) sick units scheme, (e) 100 percent equity participation under the air taxi scheme on repatriation basis; (f) 40 percent equity participation in private banks on repatriation basis; and (g) 100 percent equity participation in any company, proprietary or partnership concerns engaged in any industrial, commercial and trading activity on non-repatriation basis.

Rupee Debt: Unlike foreign currency denominated external debt, where the currency (exchange rate) risk is borne by the *borrower*, the characteristic feature of domestic currency denominated debt is that the *exchange rate risk* is borne by the *creditor*. The contractual liability, however, is settled in terms of the designated foreign currency (exports in case of rupee debt owed to Russia).This implies that the *borrower* gains (and the *creditor* loses) when the local currency depreciates since less has to be repaid in foreign currency terms and *vice versa*. India's external debt denominated in rupees consists of the following categories:

(i) *Rupee Debt*: The outstanding state credits (both defence and civilian) extended to India by the erstwhile Union of Soviet Socialist Republic (USSR). The debt is denominated in rupees and repayment of such debt is made primarily through the export of goods to Russia.

(ii) *Rupee Denominated*: Non-Resident Indians deposits *viz*. the Non-Resident (External) Rupee Account [NR(E)RA] and the Non-Resident Ordinary Rupee (NRO) Accounts. Non-Resident (External) Rupee Account is categorised as an external debt liability since the principal amount held in such accounts as well as the interest accrued are repatriable.

(iii) Foreign Institutional Investor's (FII) investments in government treasury bills (TBs) and dated securities.

(iv) Foreign Institutional Investor's investments in corporate debt securities.

The external debt can also be divided into *sovereign (government) and non-sovereign (non-government) debt*. Sovereign debt includes (i) external debt outstanding on account of loans received by Government of India under the '*external assistance*' programme and civilian component of rupee debt; (ii) other government debt comprising borrowings from IMF, defence debt component of rupee debt as well as foreign currency

defence debt; and (iii) Foreign Institutional Investor's investment in government securities. Non-sovereign debt includes the remaining components of external debt.

Foreign Direct Investment (FDI): It is defined as the investment by a foreign company in a hosting country by setting up a wholly subsidiary or getting into a joint venture for the business. For example: International Business Machines (IBM) India is a wholly owned subsidiary of IBM, and is a good example of FDI where a foreign company has set up a subsidiary in India and is conducting its business through that company. Starbucks partnering with Tata Global Beverages Limited is a recent example of FDI through joint venture.

Foreign Institutional Investment (FII): It is defined as the investment made by a foreign investor in the shares of company that is listed in hosting country or in bonds offered by the hosting country. For example, if a foreign investor buys the share of Infosys that qualifies as FII investments.

Difference between FDI and FII

Foreign direct investment targets a specific enterprise. It aims to increase the enterprises capacity or productivity or change its management control. In an FDI, the capital inflow is translated into additional production. It helps in increasing capital availability in general rather than enhancing the capital of a specific enterprise. The foreign direct investment is considered to be more stable than Foreign Institutional Investor. FDI not only brings in capital but also helps in good governance practices and better management skills and even technology transfer. Though the Foreign Institutional Investor helps in promoting good governance and improving accounting, it does not come out with any other benefits of the FDI. While the FDI flows into the primary market, the FII flows into secondary market. While FIIs are short-term investments, the FDI's are long-term investments.

Due to the suspicion and resentment against the FDI because of its political, cultural, social interference and dominance in the host countries, certain new heterogeneous forms of investment have, of late, emerged in the international financial markets. They constitute a grey area between the wholly- or majority-owned FDI and exports, and they are particularly relevant for financing the corporate sector. These new forms of investment are international joint ventures, licensing agreements or contracts which provide host licensees with access to technologies (know-how), trademarks, copyrights and patents; franchising which is a special type of licensing or technical-assistance agreements; management contracts under which foreign companies manage projects or enterprises in the host country; turnkey or product-in-hand contracts; production sharing contracts; risk service contracts; and international subcontracting.

22.6 TRENDS IN FOREIGN CAPITAL INFLOW

22.6.1 Foreign Debt

LO 5
Understand the trends in foreign capital inflow

Debt flows witnessed a large expansion during 2001–2014 led by external commercial borrowings (ECBs) as well as non-resident deposits. Gross disbursements under ECBs rose from ₹1138 billion during 2000–2001 to ₹8807 billion during 2013–2014, reflecting sustained domestic investment demand as well as import demand amidst some hardening of domestic interest rates. Greater risk appetite of global investors for emerging market bonds also facilitated higher ECB. Concession in debt could be reflected in terms of lower rate of interest,

elongation of maturity or repayment periods and is measured by the difference between the face value of a credit and the sum of the discounted future debt service payments. Different multilateral institutions follow different norms for classifying credits into concessional and non-concessional. In India, loans from International Development Association (IDA), International Fund for Agricultural Development (IFAD) and Rupee debt are categorised as concessional. The favourable feature of India's external indebtedness is that its major part is in the form of long-term debt; the share of short-term debt has been small, and it has declined from 10 to 4 percent between 1990 and 2003; further, it has increased to 20.3 percent in the year 2013–2014.

Table 22.1 throws interesting light on the level and composition of foreign debt of India. The external debt of India has increased nearly six-fold during 2001–2014, and it stands today at the huge level of about ₹ 26,500 billion. In relation to GDP, it has declined during the period 2001–2011, and then it has shown the increasing trend in the recent years. It is still about one-fourth of the GDP of India. The multilateral external debt of this

Table 22.1 Types of and total external debt of India **(₹ in billion)**

Type/Year	*2001*	*2005*	*2006*	*2007*	*2008*	*2009*	*2010*	*2011*	*2012*	*2013*	*2014*
Multilateral	1451.05	1388.97	1455.03	1540.53	1579.01	2014.25	1934.36	2166.72	2570.89	2793.50	3207.92
Bilateral	745.19	745.30	703.02	700.34	788.02	1049.97	1019.76	1149.04	1370.86	1363.96	1492.90
IMF	0.00	45.03	43.78	44.84	44.79	51.88	272.64	281.63	315.28	324.39	382.11
Trade credit	276.25	219.76	241.75	312.37	412.96	737.72	760.11	831.12	971.17	964.06	917.92
Commercial borrowings	1138.39	1155.33	1179.91	1806.69	2492.43	3182.09	3192.21	4484.48	6146.23	7624.38	8807.40
NRI deposits	772.73	1432.67	1618.34	1797.86	1746.23	2101.18	2170.62	2308.12	2998.40	3852.02	6241.01
Rupee debt	173.45	100.71	91.84	85.08	80.65	77.60	74.80	71.47	69.22	68.39	88.26
Total long-term debt	4557.06	5087.77	5333.67	6287.71	7144.09	9214.69	9424.50	11292.58	14442.05	16990.70	21137.53
Short-term debt	169.19	775.28	871.55	1226.31	1828.81	2206.56	2361.88	2901.49	3999.62	5259.30	5362.78
Gross total	4726.25	5863.05	6205.22	7514.02	8972.90	11421.25	11786.38	14194.07	18441.67	22250.01	26500.31
Concessional debt	1673.09	1799.96	1762.28	1728.22	1767.66	2135.77	1980.11	2114.92	2452.74	2469.75	2782.53
Concessional debt as % of total debt	35.40	30.70	28.40	23.00	19.70	18.70	16.80	14.90	13.30	11.10	10.50
Share of official creditors	51.2	35.6	33.3	28.6	25.9	28.5	28.6	26.3	24	20.9	19.5
Share of private creditors	48.8	64.4	66.7	71.4	74.1	71.5	71.4	73.7	76.0	79.1	80.5
Share of government borrowings in total debt	43.4	35.6	33.3	28.6	25.9	24.9	25.7	24.6	22.7	19.9	18.8
Share of Non-government borrowings in total debt	56.6	64.4	66.7	71.4	74.1	75.1	74.3	75.4	77.3	80.1	81.2

Source: External Debt Management Unit, Ministry of Finance and RBI, Hand Book of Statistics

country has been always higher than the bilateral debt. The concessional debt as a percentage of total debt has declined continuously, which imply that debt service burden of the country is increasing. Percentage of short-term debt has been increasing continuously throughout the period. The share of official creditors in total external debt has declined over the years (Table 22.1). The share of private creditors has increased from 48.8 percent at end-March 2001 to 80.5 percent at end-March 2014. Non-government debt as a proportion of total external debt increased from 56.6 percent at end-March 2001 to 81.2 percent at end-March 2014.

The currency composition of India's external debt reveals the dominance of US dollar denominated debt. At end-March 2014, the share of the US dollar debt in total external debt stood at 61.1 percent, followed by the Indian rupee (21.8 percent), SDR (6.8 percent) and Japanese yen (5.0 percent) (Table 22.2). It is worth mentioning that the share of rupee denominated debt in total external debt increased from 12.4 percent at end-March 2014 to 21.8 percent at end-March 2014, owing to increased investment by FIIs in government securities and corporate debt instruments compared to earlier periods. Although in the absolute term the external assistance has increased during 2001–2014, the percentage of external assistance to total debt has come down during this period (Table 22.3).

Table 22.2 Currency composition of external debt **(Percentage)**

Year	*US dollar*	*SDR*	*Indian rupee*	*Japanese yen*	*Euro*	*Pound sterling*	*Others*
2001	55	12.8	12.4	10.1	5.8	2.9	1.0
2002	54.3	14.1	11.9	10.2	5.7	2.9	0.9
2003	46.6	15.2	17.3	10.7	6.2	3.0	1.0
2004	40.5	15.5	22.7	11.6	5.8	3.4	0.5
2005	47.7	14.9	19.4	10.4	4.6	2.6	0.4
2006	48.8	14.3	18.8	10.9	4.4	2.6	0.2
2007	51.1	12.4	18.5	11.4	3.9	2.4	0.3
2008	55.3	10.6	16.2	12.0	3.5	2.2	0.2
2009	54.1	9.8	15.4	14.3	4.1	1.9	0.4
2010	53.2	10.7	18.7	11.5	3.6	1.8	0.5
2011	55.3	10.9	18.8	9.4	3.6	1.6	0.4
2012	56.9	8.7	20.5	8.3	3.7	0.9	1.0
2013	59.1	7.2	22.9	6.1	3.4	0.7	0.6
2014	61.1	6.8	21.8	5.0	3.3	1.1	0.9

Source: External Debt Management Unit, Ministry of Finance.

Table 22.3 External debt on government account under external assistance

Year	*Multilateral (US$ Million)*	*Bilateral (US$ Million)*	*Total (UD$ Million)*	*Total external assistance to total debt (%)*
2001	27417	13310	40727	86.17
2006	29997	13513	43510	70.11
2007	32515	13640	46155	61.42
2008	36171	16370	52541	58.55

(*Contd.*)

2009	35724	16092	51816	45.36
2010	37825	17410	55235	46.86
2011	42579	19716	62295	43.88
2012	43686	19688	63374	34.36
2013	43539	17797	61336	27.56
2014	44598	17606	62204	23.47

Source: External Debt Management Unit, Ministry of Finance.

Table 22.4 Outstanding amount of various types of NRI deposits (₹ in billion)

Year	*NR(E)RA*	*FCNR(A)*	*FCNR(B)*	*NR(NR)RD*	*FC(B&O)D*	*FC(O)N*	*Total*
1991	70.40	198.45	—	—	5.15	—	274.00
1996	134.52	146.16	196.48	121.66	—	0.45	599.27
1997	178.86	82.82	269.06	201.16	—	0.14	732.04
1998	222.67	0.04	334.45	247.35	—	0.09	804.60
1999	256.29	—	332.22	280.58	—	—	869.09
2000	294.65	—	356.32	294.47	—	—	945.44
2001	333.57	—	423.57	319.66	—	—	1076.80
2002	412.05	—	471.75	343.92	—	—	1227.72
2003	711.84	—	486.51	162.53	—	—	1360.88
2004	929.77	—	495.72	78.95	—	—	1504.44
2005	931.59	—	501.08	10.15	—	—	1442.82
2006	984.43	—	582.72	—	51.19	—	1618.34
2007	1067.86	—	659.55	—	70.47	—	1797.88
2008	1068.24	—	566.51	—	111.48	—	1746.23
2009	1191.81	—	668.03	—	241.34	—	2101.18
2010	1189.84	—	646.25	—	334.53	—	2170.61
2011	1178.02	—	696.58	—	433.52	—	2308.12
2012	1606.84	—	765.76	—	625.80	—	2998.40
2013	2497.80	—	826.08	—	528.14	—	3852.02
2014	3179.73	—	2513.54	—	547.74	—	6241.01

Source: RBI, Handbook of Statistics, 2014.

Note: DSR = Debt Service Ratio; ISR = Interest Service ratio; DGDP = Debt to Gross Domestic Product ratio; STD = Short-Term Debt; TD = Total Debt; FER = Foreign Exchange Reserves.

India has mobilised external capital from the NRIs through six different types of deposits/bonds schemes. Table 22.4 gives details in this regard. In 1991, India raised US$2 billion through India Development Bonds (IDBs). In 1998, she raised US$4.23 billion through Resurgent India Bonds (RIBs). In 1999, she raised US$6.0 billion through India Millenium Deposits (IMDs). All these funds carry high cost and they are parked abroad on which India earns a low rate of return. The servicing of IMDs has become a problem. This suggests that it is not enough to look at only the overall debt sustainability indicators mentioned above. As, it will be discussed later, there are a few major problems such as volatility of portfolio funds, impact of these funds on

the stock market volatility, the collusion between FIIs and other commercial bodies (OCBs), which are not captured by the overall sustainability indicators, but which are important and relevant while deciding about the use of foreign capital. In any case, the NRI deposits have grown to a substantial size of ₹6241.01 billion in 2014. FCNR(B), NR(E)RA, and NR(NR)RD are the three major types of NRI deposits at present, and each of them contributes to total deposits more or less equally. Net inflows under non-resident deposits also increased during 2013–2014 partly attributable to the higher interest rates on various deposit schemes as well as favourable economic conditions in the source regions of such deposits.

Recent trends in India's external debt service payments and debt service ratio are presented in Table 22.5. Debt service payments have shot up sharply since 2011–2012. Debt service ratio showed a sharp decline upto 2006–2007 and thereafter remained around the same level. Gross debt service payments amounted to US$32317 during 2013–2014. Increase in debt service payments was on account of higher interest payments for NRI deposits and larger repayment of external commercial borrowings during. Component-wise debt service payments during 1990–1991 to 2013–2014 indicate the predominance of commercial borrowings (Table 22.5). ECB forms a major part of debt service payments. Implicit interest rate on total external debt is estimated by taking interest payments during the year as a percentage of the outstanding debt at the end of the previous year. During 2013–2014, the implicit interest rate on total external debt was 2.7 percent. The

Table 22.5 India's external debt service payments (US$ million)

Year	*External assistance*	*ECB*	*IMF*	*NRI deposits*	*Rupee debt*	*Total*	*Debt service ratio*
1990–1991	2315	3414	778	1282	1193	8982	35.3
1995–1996	3691	5248	1860	1247	952	12998	26.2
1997–1998	3229	4934	667	1807	767	11404	23.0
1998–1999	3270	5070	419	1643	802	11204	19.5
2001–2002	3225	5563	0	1413	474	10675	18.7
2005–2006	2652	14839	0	1497	572	19560	10.1
2006–2007	2942	6331	0	1969	162	11404	4.7
2007–2008	3241	9771	0	1813	122	14947	4.8
2008–2009	3384	10543	0	1547	101	15575	4.4
2009–2010	3461	14742	0	1599	97	19899	5.8
2010–2011	3667	13959	0	1737	69	19432	4.4
2011–2012	3923	25198	0	2313	79	31513	6.0
2012–2013	4255	23240	0	3778	58	31331	5.9
2013–2014	4078	23398	0	4784	57	32317	5.9

Source: External Debt Management Unit, Ministry of Finance.

implicit interest on NRI deposits declined to 6.8 percent in 2013–2014 as against 12.3 percent in 2000–2001. The interest on external assistance was at 1.1 percent in 2013–2014 against 2.3 percent in 2000–2001. The implicit interest rate on external commercial borrowings also witnessed marginal moderation from the year 2001 and stood at 4.1 percent in 2013–2014 (Table 22.6). The implicit interest rate on external debt has shown fluctuations over the years.

Table 22.6 Implicit interest rates on India's external debt (percentage)

Year	*Total debt*	*External assistance*	*External commercial borrowings*	*NRI deposits*
2001	4.5	2.3	5.9	12.3
2002	4.3	2.4	4.4	10.9
2003	3.8	2.5	3.6	8.2
2004	4.3	1.7	8.2	7.1
2005	2.7	1.6	3.5	4.3
2006	3.9	1.5	9.5	4.6
2007	4.0	2.1	7.8	5.4
2008	3.9	2.3	7.5	4.4
2009	2.9	1.8	5.6	3.5
2010	2.5	1.5	4.2	3.9
2011	2.3	1.3	4.3	3.6
2012	2.8	1.1	5.0	4.5
2013	3.2	1.2	5.0	6.4
2014	2.7	1.1	4.1	6.8

Source: External Debt Management Unit, Ministry of Finance.

On the basis of certain indicators of debt sustainability for India (Table 22.7), it has been argued that her external debt situation is comfortable; India is unlikely to fall in debt crisis or debt trap. The solvency ratios have declined during 2003–2004 to 2006–2007, further it has shown a fluctuating trend. The liquidly ratios also have declined during 2003–2004 to 2005–2006, but it has increased during the period 2006–2007 to 2012–2013, and in the year 2013–2014 it has declined marginally.

Table 22.7 Indicators of debt sustainability for India (percentage)

Year	*Solvency indicators*			*Liquidity indicators*	
	DSR	*ISR*	*DGDP*	*STD/TD*	*STD/FER*
1991	35.3	15.5	28.7	10.2	92.67
1992	30.2	13.0	38.7	8.3	71.91
1993	27.5	12.5	37.5	7.0	32.93
1994	25.4	10.5	33.8	3.9	14.4
1995	25.9	9.7	30.8	4.3	19.68
1996	26.2	8.8	27.0	5.4	19.05
1997	23.0	7.3	24.6	7.2	22.9
1998	19.5	7.5	24.3	5.4	15.53
1999	18.7	7.8	23.6	4.4	11.24
2000	17.1	7.3	22.0	4.0	9.309
2001	16.6	6.6	22.5	3.6	6.705
2002	13.7	5.4	21.1	2.8	3.607

(*Contd.*)

2003	16.0	4.1	20.3	4.5	4.133
2004	16.1	—	18.0	3.9	3.131
2005	5.9	2.5	18.1	13.2	11.69
2006	10.1	2.8	16.8	14.0	9.808
2007	4.7	2.3	17.5	16.3	9.082
2008	4.8	—	18.0	20.4	18.65
2009	4.4	—	20.3	19.3	17.69
2010	5.8	—	18.2	20.1	17.17
2011	4.4	—	18.2	20.4	22.08
2012	6.0	—	20.5	21.7	26.77
2013	5.9	—	22.0	23.6	31.78
2014	5.9	—	23.3	20.3	26.12

Note: DSR = Debt Service Ratio; ISR = Interest Service ratio; DGDP = Debt to Gross Domestic Product Ratio; STD = Short-Term Debt; TD = Total Debt; FER = Foreign Exchange Reserves

Source: External Debt Management Unit, Ministry of Finance.

The ratio of India's external debt stock to gross national income (GNI) has decreased from 22 percent in the year 2003 to 18.2 percent in the year 2009, but again it has increased to 23 percent in the year 2013. China has the lowest ratio among all the countries (Table 22.8).

Table 22.8 Total debt to gross national income of select countries

Country	*2003*	*2004*	*2005*	*2008*	*2009*	*2013*
India	22	17.9	15.4	19	18.2	23
China	15	12.9	12.5	8.7	8.7	9.5
Brazil	50	38.0	24.4	16.2	17.9	21.9
Mexico	23	20.8	22.1	19.1	22.3	35.9
Argentina	104	117.4	64.6	39.9	40.1	22.7
Pakistan	50	38.0	—	28.7	31.3	22.8

Source: External Debt Management Unit, Ministry of Finance.

22.7 FOREIGN EQUITY INVESTMENT INFLOWS

Foreign investment inflows include direct investments and portfolio investments, which, in turn, include GDR/IDRs, investments by FIIs, offshore funds and others. The break-up of the investment inflows shows that (a) portfolio investments were higher than direct investments in certain years, while they have been less than the direct investments in certain other years; and (b) while portfolio investments have fluctuated from year to year significantly, the direct investments have mostly increased steadily (Table 22.9).

Table 22.9 Foreign investment inflows in India **(₹ in crore)**

Year	*Direct Investment*	*Portfolio Investment*	*Total*
1990–1990	174	11	185
1991–1992	316	10	326
1992–1993	965	748	1713
1993–1994	1838	11,188	13,026
1994–1995	4126	12,007	16,133
1995–1996	7172	9197	16,364
1996–1997	10,015	11,758	21,773
1997–1998	13,220	6696	19,916
1998–1999	10356	–256	10,101
1999–2000	9338	13112	22,450
2000–2001	18,404	11,820	30,224
2001–2002	29,245	9290	38,535
2002–2003	24,397	4504	28,901
2003–2004	19,830	51,898	71,728
2004–2005	26,947	41,312	68,259
2005–2006	39,457	55,357	94,814
2006–2007	102,652	31,881	134,533
2007–2008	139,421	110,619	250,040
2008–2009	190,645	–65,045	125,600
2009–2010	157,819	153,967	311,786
2010–2011	132,358	139,381	271,739
2011–2012	154,961	85,571	240,532
2012–2013	146,954	146,467	293,421
2013–2014	186,830	29,680	216,510

Note: Data from 2013–2014 are provisional.

Source: RBI, Handbook of Statistics, 2014.

The share of equity investment in the total foreign direct investment has been more than 70 percent in the year 2012–2013, and within the equity investment the investments by RBI has been the highest followed by reinvestment earnings and acquisition of shares investments. The major components of foreign portfolio investment have been the ADRs, GDRs and foreign institutional investments (Table 22.10).

Among the developing countries, India has now emerged as one of the preferred FDI destinations after China and Brazil. The FPI has also been increasing continuously throughout the period (Table 22.11).

Table 22.10 Components wise foreign investment inflows

Items	*2000–2001*	*2003–2004*	*2004–2005*	*2005–2006*	*2006–2007*	*2007–2008*	*2008–2009*	*2009–2010*	*2010–2011*	*2011–2012*	*2012–2013*
(A) Direct Investment (I + II + III)	4,029	4,322	6,051	8,961	22,826	34,835	41,874	37,745	32,901	46,553	36,046
(I) Equity	2400	2229	3778	5975	16,481	26,864	32,066	27,146	20,304	35,854	25,274
(a) Government	1456	928	1062	1126	2156	2298	5400	3471	1945	3046	1185
(b) RBI	454	534	1258	2233	7151	17,127	21,332	18,987	12,994	20,427	14,869
(c) NRI	67	—	—	—	—	—	—	—	—	—	—
(d) Acquisition	362	735	930	2181	6278	5148	4632	3148	4491	11,360	8245
(e) Equity capital of unincorporated bodies						2291	702	1540	874	1,021	975
(II) Reinvestment earnings +	61	32	528	435	896	7679	9032	8668	11,939	8,205	8978
(III) Other capital +	1350	1460	1904	2760	5828	292	776	1931	658	2494	1794
(B) Portfolio investment (a + b + c)	279	633	369	226	517	27,271	–13,855	32,376	31,471	17,171	4822
(a) GDR/ADR	2760	11,377	9315	12,492	7003	6645	1162	3328	2049	597	20
(b) FIIs	831	459	613	2552	3776	20,328	–15,017	29,048	29,422	16,813	5009
(c) Offshore funds and others	1847	10,918	8686	9926	3225	298	—	—	—	—	—
Total (A + B)	4308	4955	6420	9187	23,343	62,106	28,019	70,121	64,372	63,724	40,868

Source: RBI, Bulletin, Various Issues

Table 22.11 Foreign direct and portfolio investment to selected countries (US$ billions)

Country	*Foreign direct investment (FDI)*						*Foreign portfolio investment (FPI)*					
	2000	*2005*	*2010*	*2011*	*2012*	*2013*	*2000*	*2005*	*2010*	*2011*	*2012*	*2013*
India	3.58	7.27	27.40	36.50	24.00	28.15	2.35	12.15	30.44	–4.05	22.81	19.89
Argentina	10.42	5.27	7.85	10.72	15.32	11.39	–3.22	–0.05	–0.21	–0.17	0.88	0.46
Brazil	32.78	15.46	53.34	71.54	76.11	80.84	3.08	6.45	37.67	7.17	5.60	11.64
Chile	4.86	6.98	15.73	23.44	28.54	20.26	–0.43	1.57	1.76	4.65	5.64	6.03
China	38.40	111.21	272.99	331.59	295.63	347.85	6.91	20.57	31.36	5.31	29.90	32.59
Indonesia	–4.55	8.34	15.29	20.56	21.20	23.34	–1.02	–0.17	2.13	–0.33	1.70	–1.83
Malaysia	3.79	3.92	10.89	15.12	9.73	11.58	0.00	–1.20				
Mauritius	0.26	0.04	0.43	0.43	0.59	0.26	0.00	0.04	7.82	5.92	0.52	0.71
Mexico	17.77	24.74	25.90	23.63	18.13	42.09	0.45	3.35	0.37	–6.57	9.88	–0.94

(*Contd.*)

Philippines	2.24	1.66	1.07	2.01	3.22	3.66	–0.20	0.42	0.83	1.04	1.75	–0.03
Russian Federation	2.71	15.51	43.17	55.08	50.59	70.65	0.15	–0.16	–4.89	–9.80	1.16	–7.63
South Africa	0.97	6.52	0.11	0.10	0.11	0.11	4.17	7.23	5.83	–3.77	–0.68	1.01
Thailand	3.37	8.06	9.10	3.87	10.69	12.65	0.90	5.12	3.21	–0.41	2.66	–6.49

Source: Global Development Finance, World Bank Online

The yearly FII investments in India have been in large size in gross terms, that is, in terms of gross purchases and gross sales by FIIs. For example, while the gross purchases of FIIs were of the order of ₹992,596 crore, their gross sales were ₹846,158 crore in 2010–2011. The net FII investments in India have been usually small in comparison to gross flows. The highest amount of net FII investment was ₹168,367 crore in 2012–2013, while such investment was negative (₹ -1584 crore) in 1998–1999 and (₹ –45,811 crore) in 2008–2009. There has been no clearly increasing or decreasing trend in FII net investment; it has fluctuated up and down from year to year during 1992–1993 to 2012–2013 (Table 22.12). The FII in equity has been dominating over the

Table 22.12 Volume of FII investments in India

Year	*Gross purchase (₹ crore)*	*Gross sales (₹ crore)*	*Net investments(+) or net sales(–)*	*Net investments (US$ million)*	*Cumulative net investments (US$ million)*
1992–1993	18	4	13	4	4
1993–1994	5593	467	5127	1634	1638
1994–1995	7631	2835	4796	1528	3167
1995–1996	9694	2752	6942	2036	5202
1996–1997	15,554	6980	8575	2432	7635
1997–1998	18,695	12,737	5958	1650	9285
1998–1999	16,116	17,699	–1584	–386	8899
1999–2000	56,857	46,735	10122	2474	11,372
2000–2001	74,051	64,118	9933	2160	13,531
2001–2002	50,071	41,308	8763	1839	15,371
2002–2003	47,062	44,372	2689	566	15,936
2003–2004	144,855	99,091	45764	10,005	25,942
2004–2005	216,951	171,071	45,880	10,352	36,293
2005–2006	346,976	305,509	41,467	9363	45,657
2006–2007	520,506	489,665	30,841	6821	52,477
2007–2008	948,018	881,839	66,179	16,442	68,919
2008–2009	614,576	660,386	–45,811	–9837	59,082
2009–2010	846,433	703,776	142,658	30,252	89,333
2010–2011	992,596	846,158	146,438	32,226	121,559
2011–2012	921,285	827,562	93,725	18,923	140,482
2012–2013	904,845	736,481	168,367	31,047	171,529

Source: SEBI, Handbook of Statistics -2009, 2014.

FII in debt throughout the period except in the year 1998–1999. This could be due to the less-developed corporate debt market in India. The equity investment trend has also fluctuated much due to the equity market condition in India (Table 22.13).

Table 22.13 Investments by foreign institutional investors in terms of debt and equity

(₹ in crore)

Year	*Equity*	*Debt*	*Equity as a % of Total*	*Debt as a % of Total*	*Total*
1992–1993	13	0	100.00	0.00	13
1993–1994	5,127	0	100.00	0.00	5127
1994–1995	4796	0	100.00	0.00	4796
1995–1996	6942	0	100.00	0.00	6942
1996–1997	8546	29	99.66	0.34	8575
1997–1998	5267	691	88.40	11.60	5958
1998–1999	–717	–867	45.27	54.73	–1584
1999–2000	9670	453	95.53	4.48	10,122
2000–2001	10207	–273	102.76	–2.75	9933
2001–2002	8072	690	92.11	7.87	8763
2002–2003	2527	162	93.98	6.02	2689
2003–2004	39,960	5805	87.32	12.68	45,765
2004–2005	44,123	1759	96.17	3.83	45,881
2005–2006	48,801	–7334	117.69	–17.69	41,467
2006–2007	25,236	5,605	81.83	18.17	30,840
2007–2008	53,404	12,775	80.70	19.30	66,179
2008–2009	–47,706	1895	104.14	–4.14	–45,811
2009–2010	110,221	32,438	77.26	22.74	142,658
2010–2011	110,121	36,317	75.20	24.80	146,438
2011–2012	43,738	49,988	46.67	53.33	93,726
2012–2013	140,033	28,334	83.17	16.83	168,367
2013–2014	79,709	–28,060	154.33	–54.33	51,649

Source: SEBI, Annual Report, 2013.

Foreign Investment in India is governed by the FDI policy announced by the Government of India and the provision of the Foreign Exchange Management Act (FEMA) 1999. The Reserve Bank of India (RBI) in this regard had issued a notification, which contains the Foreign Exchange Management (Transfer or issue of security by a person resident outside India) Regulations, 2000. This notification has been amended from time to time. Department of Industrial Policy and Promotion (DIPP) under the Ministry of Commerce and Industry, Government of India is the nodal agency for monitoring and reviewing the FDI policy on continued basis and changes in sectoral policy/sectoral equity cap which goes from 26 to 100 percent at present. The FDI policy is notified through press notes/policy circulars by the Secretariat for Industrial Assistance (SIA), Department

of Industrial Policy and Promotion (DIPP), Ministry of Commerce and Industry. FDI is allowed under direct route and government. The foreign investors are free to invest in India, except few sectors/activities, where prior approval from the RBI or Foreign Investment Promotion Board (FIPB) would be required.

Country-wise, Mauritius, Singapore and the United Kingdom are the major FDI investors in India. Large flows from Mauritius could be attributed to its use by investors in other countries for channelling FDI flows into India. FDI flows from the United States, the Netherlands and Japan also increased sharply cumulatively throughout the period (Table 22.14). The major percentage of FDI was coming to India through the government approval routes during the period 1993–1994 to 2003–2004. This trend has been changed during 2004–2005 to 2014–2015. During this period, majority of shares are coming to India through automatic routes (RBI) (Table 22.15). The sectors which have been the major beneficiaries of the actual FDI inflows have been telecommunications, energy, electrical equipment, transport industry, chemicals and the services

Table 22.14 Share of top investing countries in FDI inflows in India (amount in US$ million)

Country	*2003–2004*	*2004–2005*	*2005–2006*	*2006–2007*	*2008–2009*	*2009–2010*	*2010–2011*	*2011–2012 P*	*2012–2013 P*	*Cumulative*	*Percentage*
Mauritius	381	820	1363	3780	10,165	9801	5616	8142	8059	48127	34.94
U.S.A	297	469	346	706	1236	2212	1071	994	478	7809	5.67
UK	157	84	261	1809	690	643	538	2760	1022	7964	5.78
Singapore	15	64	166	582	3360	2218	1540	3306	1605	12856	9.33
Germany	69	143	45	116	611	602	163	368	467	2584	1.88
Netherlands	197	196	50	559	682	804	1417	1289	1700	6894	5.01
Japan	67	122	86	80	266	971	1256	2089	1340	6277	4.56
France	34	44	12	100	437	283	486	589	547	2532	1.84
Switzerland	5	64	68	57	135	96	133	211	268	1037	0.75
South Korea	22	14	61	68	95	159	136	226	224	1005	0.73
Total FDI	1462	2320	3359	9307	22,697	22,461	14,939	23,473	18,286	118304	—

Note: 'P' refers to provisional.
Source: RBI, Various Publications

Table 22.15 Wise route/wise FDI equity inflows in India

(values are in percent except cumulative total)

Year	*Government (SIA/FIPB)*	*RBI (Automatic route)*	*Acquisition of shares**	*Equity capital of unincorporated bodies #*	*Cumulative total (US$ millions)*
1990–1991					—
1991–1992	51.16	0.00	48.84	0.00	129
1992–1993	70.48	13.33	16.19	0.00	315
1993–1994	47.78	15.19	37.03	0.00	586
1994–1995	53.35	13.01	33.64	0.00	1314
1995–1996	58.26	7.88	33.86	0.00	2144

(*Contd.*)

1996–1997	68.13	4.79	27.08	0.00	2821
1997–1998	77.42	5.68	16.90	0.00	3557
1998–1999	73.96	7.27	18.77	0.00	2462
1999–2000	65.43	7.94	26.64	0.00	2155
2000–2001	60.67	18.92	17.88	2.54	2400
2001–2002	54.24	18.73	22.37	4.66	4095
2002–2003	33.25	26.74	33.14	6.87	2764
2003–2004	41.63	23.96	32.97	1.44	2229
2004–2005	28.11	33.30	24.62	13.98	3778
2005–2006	27.75	33.27	32.50	6.48	6,711
2006–2007	13.08	43.39	38.09	5.44	16,481
2007–2008	8.55	63.75	19.16	8.53	26,864
2008–2009	16.84	66.53	14.45	2.19	32,066
2009–2010	12.79	69.94	11.60	5.67	27,146
2010–2011	8.74	58.40	28.93	3.93	22,250
2011–2012	8.50	56.97	31.68	2.85	35,856
2012–2013	10.14	69.77	15.46	4.63	22,884
2013–2014	4.69	58.83	32.62	3.86	25,274
2014–2015	6.79	61.30	28.87	3.04	17,665

*Note: * Acquisition of shares—It relates to acquisition of shares of Indian companies by non-residents.*
#Equity capitals of unincorporated bodies— Provisional figures are estimates.
Source: RBI, Various publications

sector. At the sectoral level also, on an average, the actual inflows/approvals of FDI ratio has been rather small; it was as low as 9.7 percent for energy, and only as high as 38 percent for chemicals during 1991–2002. Sector-wise, manufacturing industries and services, particularly finance and business services, remained the major beneficiary of FDI inflows. The services sector attracted the maximum FDI inflows (US$6.1 billion in 2006–2007 as compared with US$1.4 billion in 2005–2006). FDI inflows into the construction sector and 'financing, real estate and business services' increased substantially during 2006–2007. During the period 2006–2007 to 2012–2013 manufacturing sector attracted maximum FDI in India (Table 22.16).

Table 22.16 Sectors attracting highest FDI equity inflows (amount in US$ million)

	2006–2007	*2007–2008*	*2008–2009*	*2009–2010*	*2010–2011*	*2011–2012 P*	*2012–2013 P*	*Cumulative Total*	*Percentage*
Manufacture	1641	3726	4777	5143	4793	9337	6528	**35945**	27.53
Construction	967	2551	2237	3516	1599	2634	1319	**14823**	11.35
Financial Services	1,330	3850	4430	2206	1353	2603	2760	**18532**	14.19
Real Estate Activities	431	1336	1886	2191	444	340	197	**6825**	5.23
Electricity and other Energy Generation, Distribution & Transmission	174	829	669	1877	1338	1395	1653	**7935**	6.08

(*Contd.*)

Communication Services	423	66	2067	1852	1228	1458	92	**7186**	5.50
Business Services	2425	1158	643	1554	569	1590	643	**8582**	6.57
Miscellaneous Services	298	1901	1458	888	509	801	552	**6407**	4.91
Computer Services	824	1035	1647	866	843	736	247	**6198**	4.75
Restaurants & Hotels	153	280	343	671	218	870	3129	**5664**	4.34
Retail & Wholesale Trade	47	200	294	536	391	567	551	**2586**	1.98
Mining	42	461	105	268	592	204	69	**1741**	1.33
Transport	165	816	401	220	344	410	213	**2569**	1.97
Trading	82	176	400	198	156	6	140	**1158**	0.89
Education, Research & Development	43	156	243	91	56	103	150	**842**	0.64
Total FDI	**9307**	**19,425**	**22,697**	**22,461**	**14,939**	**23,473**	**18,286**	**130,588**	

Source: RBI, Various Publications.

India has been following a liberal policy with respect to FDI investments in India, which is reflected in increasing significantly the permitted FDI limits for different sectors. Table 22.17 shows the FDI limits allowed by the authorities at present. These limits were raised to 100 percent in the case of sectors such as agriculture, mining, telecom services, petroleum, telecom services, e-commerce activities, single brand product activities, pharmaceuticals, non-banking finance companies railways, scientific technical journals, oil refining, oil marketing, and oil pipelines. In defence, it has increased from 26 to 49 percent. Similarly the limit was hiked from 49 to 74 percent in the case of private sector banking from the same date.

At present automatic approvals route for 100 percent FDI into equity shares or convertibles for NRIs is available subject to following major conditions:

(i) The industry in which FDI is planned does not require industrial license as per license rules.

(ii) The shares or convertibles are not issued to acquire another Indian Company.

(iii) Investors wishing to take over completely or wishing to have a collaboration need to take central government permission, if they have a previous tie-up in similar industry in India.

(iv) The issue price should not be less than SEBI price in case of listed companies.

(v) If preference shares are issued, the dividend rate should not exceed 300 basis points over SBI PLR. The automatic route for FID is not available for the following activities or items:

(a) Banking; (b) Activities of NBFCs; (c) Civil aviation; (d) Petroleum including exploration, refinery and marketing; (e) Housing and real estate development; (f) Venture capital funds and venture capital companies; (g) Companies investing in infrastructure and service sectors; (h) Atomic energy and related projects; (i) Defence and strategic industries; (j) Agriculture; and (k) Print media, broadcasting and postal services.

Table 22.17 Current permitted FDI limits in different sectors

	Sector	*Limit (%)*
1.	Agriculture & Animal Husbandry	100%
1.(a)	Tea plantation	100%
2.	Mining	100%
2.(b)	Coal and lignite	100%
3.	Petroleum & Natural Gas	100%
3.(b)	Petroleum refining by the public sector undertakings (PSU), without any disinvestment or dilution of domestic equity in the existing PSUs.	49%
4.	Defence	49%
5.	Broad casting carriage services	74%
5.(a)	Cable networks	49%
5.(b)	Broadcasting content services (terrestrial broadcasting FM/Up-linking of 'news and current affairs' TV channels)	26%
5.(c)	Up-linking of Non-'news and current affairs' TV channels/down-linking of TV channels	100%
6.	Print media (publishing of newspaper and periodicals dealing with news and current affairs/publication of Indian editions of foreign magazines dealing with news and current affairs)	26%
6.(a)	Publishing/printing of scientific and technical magazines/specialty journals/periodicals/publication of facsimile edition of foreign newspapers	100%
7.	Airports	100%
7.(a)	Scheduled air transport service/domestic scheduled passenger airline	49% FDI (100% for NRIs)
7.(b)	Non-scheduled air transport service	74% FDI (100% for NRIs)
7.(c)	Helicopter services/seaplane services requiring DGCA approval	100%
8.	Satellites-establishment and operation	74%
9.	Private security agencies	49%
10.	Telecom services	100%
11.	E-commerce activities	100%
12.	Single brand product retail trading	100%
12.(b)	Multi brand retail trading	51%
13.	Asset reconstruction companies	100% of paid-up capital of ARC (FDI + FII/FPI)
14.	Banking—Private sector	74% including investment by FIIs/FPIs
14.(b)	Banking—Public sector	20% (FDI and Portfolio Investment)
15.	Commodity exchange	49% (FDI + FII/FPI) [Investment by registered FII/FPI under Portfolio Investment Scheme (PIS) will be limited to 23% and investment under FDI Scheme will be limited to 26%]

(*Contd.*)

16.	Credit information companies	74% (FDI + FII/FPI)
17.	Infrastructure company in the securities market	49% (FDI + FII/FPI) [FDI limit of 26 percent and FII/FPI limit of 23 percent of the paid-up capital]
18.	Insurance	26% (FDI + FII/FPI + NRI)
19.	Non-banking finance companies (NBFC)	100%
20.	Pharmaceuticals	100%
21.	Power exchanges	49% (FDI + FII/FPI)

Source: Ministry of DIPP, FDI Manual

22.8 FDI IN THE RETAIL SECTOR IN INDIA

LO 6
Review FDI in the retail sector in India

Opening the retail industry to FDI has the benefits in terms of employment, organised retail stores, availability of quality products at a better and cheaper price, availability of new technology, and so on. A total of 100 percent FDI in single brand (with revised guidelines) and 51 percent in multi-brand retailing with some conditions have now been allowed in India with effect from 20 September, 2012 with an option to the state governments to allow or not to allow the FDI in retail sector in their states.

22.8.1 Single Brand Retailing[4]

1. Foreign Investment in single brand product retail trading is aimed at attracting investments in production and marketing, improving the availability of such goods for the consumer, encouraging increased sourcing of goods from India and enhancing competitiveness of Indian enterprises through access to global designs, technologies and management practices. In 2006, 51 percent foreign direct investment in single brand retail was permitted. In 2011, 100 percent FDI was allowed in single brand retail withholding the FDI in multi brand retail due to various political reasons.
2. FDI in single brand product retail trading would be subject to the following conditions:
   (a) Products to be sold should be of a 'single brand' only.
   (b) Products should be sold under the same brand internationally, that is, products should be sold under the same brand in one or more countries other than India.
   (c) 'Single brand' product-retail trading would cover only products which are branded during manufacturing.
   (d) A non-resident entity or entities, whether owner of the brand or otherwise, shall be permitted to undertake 'single brand' product retail trading in the country for the specific brand, directly or through a legally tenable agreement with the brand owner for undertaking single brand product retail trading. The onus for ensuring compliance with this condition will rest with the Indian entity carrying out single-brand product retail trading in India. The investing entity shall provide evidence to this effect at the time of seeking approval, including a copy of the licensing/franchise/

[4]http://dipp.nic.in/English/policies/FDI_Circular_2015.pdf.

sub-licence agreement, specifically indicating compliance with the above condition. The requisite evidence should be filed with the RBI for the automatic route and SIA/FIPB for cases involving approval.

(e) In respect of proposals involving FDI beyond 51 percent, sourcing of 30 percent of the value of goods purchased will be done from India, preferably from MSMEs, village and cottage industries, artisans and craftsmen, in all sectors. The quantum of domestic sourcing will be self-certified by the company, to be subsequently checked by statutory auditors, from the duly certified accounts which the company will be required to maintain. This procurement requirement would have to be met, in the first instance, as an average of 5 years' total value of the goods purchased, beginning 1st April of the year during which the first tranche of FDI is received. Thereafter, it would have to be met on an annual basis. For the purpose of ascertaining the sourcing requirement, the relevant entity would be the company, incorporated in India, which is the recipient of FDI for the purpose of carrying out single-brand product retail trading.

(f) Retail trading, in any form, by means of e-commerce, would not be permissible, for companies with FDI, engaged in the activity of single-brand retail trading.

3. Application seeking permission of the government for FDI exceeding 49 percent in a company which proposes to undertake single brand retail trading in India would be made to the Secretariat for Industrial Assistance (SIA) in the Department of Industrial Policy & Promotion. The applications would specifically indicate the product/product categories which are proposed to be sold under a 'single brand'. Any addition to the product/product categories to be sold under 'single brand' would require a fresh approval of the government. In case of FDI up to 49 percent, the list of products/product categories proposed to be sold except food products would be provided to the RBI.
4. Applications would be processed in the Department of Industrial Policy & Promotion to determine whether the proposed investment satisfies the notified guidelines, before being considered by the FIPB for government approval.

22.8.2 Multi Brand Retailing[5]

FDI in multi brand retail trading, in all products, will be permitted, subject to the following conditions:

(i) Fresh agricultural produce, including fruits, vegetables, flowers, grains, pulses, fresh poultry, fishery and meat products, may be unbranded.

(ii) Minimum amount to be brought in, as FDI, by the foreign investor, would be US$100 million.

(iii) At least 50 percent of total FDI brought in the first tranche of US$100 million, shall be invested in 'back-end infrastructure' within 3 years, where 'back-end infrastructure' will include capital expenditure on all activities, excluding that on front-end units; for instance, back-end infrastructure will include investment made towards processing, manufacturing, distribution, design improvement, quality control, packaging, logistics, storage, warehouse, agriculture market produce infrastructure and so on. Expenditure on land cost and rentals, if any, will not be counted for purposes of back-end infrastructure.

[5]http://dipp.nic.in/policies/FDI_Circular_2015.pdf.

(iv) At least 30 percent of the value of procurement of manufactured/processed products purchased shall be sourced from Indian micro, small and medium industries, which have a total investment in plant and machinery not exceeding US$2.00 million. This valuation refers to the value at the time of installation, without providing for depreciation. The 'small industry' status would be reckoned only at the time of first engagement with the retailer, and such industry shall continue to qualify as a 'small industry' for this purpose, even if it outgrows the said investment of US$2.00 million during the course of its relationship with the said retailer. Sourcing from agricultural co-operatives and farmers co-operatives would also be considered in this category. The procurement requirement would have to be met, in the first instance, as an average of 5 years' total value of the manufactured/processed products purchased, beginning 1st April of the year during which the first tranche of FDI is received. Thereafter, it would have to be met on an annual basis.

(v) Self-certification by the company, to ensure compliance of the conditions at serial nos. (ii), (iii) and (iv) above, which could be cross-checked, as and when required. Accordingly, the investors shall maintain accounts, duly certified by statutory auditors.

(vi) Retail sales outlets may be set up only in cities with a population of more than 10 lakh as per 2011 Census or any other cities as per the decision of the respective state governments, and may also cover an area of 10 km around the municipal/urban agglomeration limits of such cities; retail locations will be restricted to conforming areas as per the master/zonal plans of the concerned cities and provision will be made for requisite facilities such as transport connectivity and parking.

(vii) Government will have the first right to procurement of agricultural products.

(viii) The above policy is an enabling policy only and the state governments/union territories would be free to take their own decisions in regard to implementation of the policy. Therefore, retail sales outlets may be set up in those states/union territories which have agreed, or agree in future, to allow FDI under this policy.

(ix) Retail trading, in any form, by means of e-commerce, would not be permissible, for companies with FDI, engaged in the activity of multi-brand retail trading.

(x) Applications would be processed in the Department of Industrial Policy & Promotion, to determine whether the proposed investment satisfies the notified guidelines, before being considered by the FIPB for Government approval.

Implications of FDI in Retail Sectors: An Indian Scenario

In the recent years, the entry of foreign players on the retail sectors in India has been a crucial topic of discussion and debate among the policy makers, economists, analysts, producers and consumers. Most of the foreign participants choose India for investments due to its high market potential, low economic risk and moderate political risk. The size of the Indian retail industry is around $520 billion with nearly 10 percent of GDP, employing 21 million persons which amounts to 7 percent of the labour force. However, the trade in India is fragmented, unorganised and individually small. The 15 million 'kirana shops' constitute the unorganised sector (96 percent) leaving the rest to the organised retailing. In such a scenario, the entry of foreign retailers will have an effect on different stakeholders both on the demand side as well

as on the supply side. On the demand side, it will affect consumers, small retailers, wholesalers and local large retailers. On the supply side, it will affect employment, farmers, manufacturers, middlemen and government agents. The net effects are in terms of increase (or decrease) of total surplus of the system. It has been perceived by economists that in the long run, it would increase the overall investment and generate employment to a significant level. Though the participation of foreign investors in retail segment is anticipated to yield several benefits over the years, there are some pertaining issues that need to be addressed adequately. The retail sector is the second largest employer in India; the primary issue is to retain the existing players and enabling them to earn their livelihood or accommodating them appropriately. It has been argued that the existing retailers may have enough experiences in retailing, but they may not possess requisite professional skills to operate in a 'super store'. In this conjecture, facilitating and updating their skills to match with the international player is one of the biggest challenges. Besides, more than 60 percent are family-owned business in India; it would be tough to shift from a traditional system of business toa new system where all players can operate in a single platform. It is also postulated that the introduction of FDI in the retail segment will lead to price rise and for which, small players will suffer a lot.

22.9 SOVEREIGN WEALTH FUND (SWF)

LO 7

Discuss the benefits, issues and development of sovereign wealth funds

Sovereign Wealth Fund (SWF) is a state-owned investment fund composed of financial assets such as stocks, bonds, real estate or other financial instruments funded by foreign exchange assets. SWFs can be structured as a fund or as a reserve investment corporation. Some funds also invest indirectly in domestic state-owned enterprises. In addition, they tend to prefer returns over liquidity, thus they have a higher risk tolerance than traditional foreign exchange reserves. The accumulated funds may have their origin in, or may represent foreign currency deposits, gold, SDRs and IMF reserve positions held by central banks and monetary authorities, along with other national assets such as pension investments, oil funds or other industrial and financial holdings. These are assets of the sovereign nations which are typically held in domestic and different reserve currencies such as the dollar, euro and yen. Such investment management entities may be set up as official investment companies, state pension funds, or sovereign oil funds among others. There have been attempts to distinguish funds held by sovereign entities from foreign exchange reserves held by central banks. The former can be characterised as maximising long-term return, with the latter serving short-term currency stabilisation and liquidity management. Many central banks in recent years possess reserves massively in excess of needs for liquidity or foreign exchange management. Moreover, it is widely believed that most of the central banks have diversified hugely into assets other than short-term, highly liquid monetary ones, though almost no data is available to back up this assertion. Some central banks even have begun buying equities or derivatives.

SWFs are a heterogeneous group and may serve various purposes. Five types of SWFs can be distinguished based on their main objective: (i) stabilisation funds, where the primary objective is to insulate the budget and the economy against commodity (usually oil) price swings; (ii) savings funds for future generations, which aim to convert non-renewable assets into a more diversified portfolio of assets and mitigate the effects of Dutch disease; (iii) reserve investment corporations, whose assets are often still counted as reserve assets, and are established to increase the return on reserves; (iv) development funds, which typically help fund socio-

economic projects or promote industrial policies that might raise a country's potential output growth; and (v) contingent pension reserve funds, which provide (from sources other than individual pension contributions) for contingent unspecified pension liabilities on the government's balance sheet.

22.9.1 Benefits and Issues of SWF

SWFs offer a variety of economic and financial benefits. They help avoid boom–bust cycles in their home countries, and facilitate the saving and transfer across generations of proceeds from fiscal surpluses related to commodity exports and privatisations. They also allow for a greater portfolio diversification and focus more on returns than is traditionally the case for central-bank-managed reserve assets, thereby reducing the opportunity costs of reserves holdings. The growth of SWFs has also raised several issues. In addition to official and private commentators' concerns about the impact of SWFs—including their size and their investment strategies—they also raise the issue of the expanded role of governments in international markets and industries. Some observers worry that SWF investments may be motivated, in certain cases, by political objectives. Concerns have been raised about how SWFs fit into the domestic policy formulation of countries with such funds. At the same time, countries with SWFs are concerned about protectionist restrictions on their investments, which could hamper the international flow of capital.

22.9.2 Development of SWFs

Sovereign Wealth Funds have been around for decades but since 2000, the number of Sovereign Wealth Funds has increased dramatically. The first SWF was the Kuwait Investment Authority, a commodity SWF created in 1953 from oil revenues before Kuwait even gained independence from Great Britain. According to many estimates, Kuwait's fund is now worth approximately $592 billion. SWFs growth reflects high oil and non-oil commodity prices and general reserve accumulation in other countries. The assets under management under SWFs are around $7.25 trillion by end of 2015.

The largest SWFs which have assets over $100 billion by end of 2015 are shown in the Table 22.18 and have accounted more than 73 percent of the total assets under management. The share of SWFs related to oil and gas is around 55 percent (Table 22.19). In terms of region, Middle East and Asia have been dominating followed by the United Kingdom. SWFs exceed the size of hedge funds (US$1.7 trillion), but the latter tend to be heavily leveraged, so that the comparison is somewhat misleading. While SWFs may still be relatively small in comparison with total global financial assets, estimated at US$250 trillion and even smaller relative to total global financial and real assets, they are significant relative to both mature market stock market capitalisation and emerging market economies' debt and capital markets. SWFs are likely to become even more important in the future. Current fund projections show that some sovereigns will continue to accumulate foreign assets as a result of large and persistent current account surpluses. An important point to note is the 'SWF to Foreign Reserve Exchange Ratio' which shows the proportion a government has invested in investments relative to currency reserves. According to the SWF Institute, most oil-producing nations in the gulf have a higher SWF to Foreign Exchange Ratio such as the Qatar Investment Authority (5.89 percent) compared to CIC's (0.12 percent), thus reflecting a more aggressive stance to seek higher returns.

Table 22.18 Largest SFWs by assets under management (as on December 2015)

Country	*SWF name*	*Assets under management US$billion*	*Inception*	*Origin*
1. Norway	Government Pension Fund	847.6	1990	Oil
2. UAE	Abudhabi Investment Authority	792	1976	Oil
3. China	China Investment Company	746.7	2007	Non-commodity
4. Soudi Arabia	SAMA Foreign Holdings	598.4	NA	Oil
5. Kuwait	Kuwait Investment Authority	592	1953	Oil
6. China	SAFE Investment Company	474	1997	Non-commodity
7. Hong Kong	Hong Kong Monetary Authority Investment Portfolio	442.4	1993	Non-commodity
8. Singapore	Government of Singapore Investment Corporation	344	1981	Non-commodity
9. Qatar	Qatar Investment Authority	256	2005	Oil and Gas
10. China	National Social Security Fund	236	2000	Non-commodity
Others		**1927.7**		
Total		**7256.8**		

Source: http://www.swfinstitute.org/sovereign-wealth-fund-rankings.

Table 22.19 Assets under SWF across sector and region (percentage to total)

	2010	*2015*
Across the sectors (%)		
Investment in oil and gas-related activities	55.21	57.03
Others	44.79	42.97
Region wise (%)		
Middle East	39.06	40.24
Asia	39.76	39.74
Europe	15.08	13.11
America	2.7	2.8
Africa	1.8	2.7
Others	1.6	1.4

Source: http://www.swfinstitute.org/sovereign-wealth-fund-rankings.

22.9.3 Some Facts about SWFs

(i) While some information is available, there is no uniform public disclosure of the assets, strategies and governance of SWFs, and a few funds reveal little at all. The information that is available suggests SWFs have been largely conservative investors.

(ii) SWF portfolios typically involve more diversified asset allocations than traditional reserves holdings, with considerable stakes in equities and a wider geographical dispersion.

(iii) In the recent financial turmoil, SWFs have demonstrated that they can have a stabilising influence on markets.

(iv) There is no clear evidence that SWF investments have been motivated by narrow political objectives.

(v) SWFs' assets, and the returns they generate, are likely to have a significant impact on a country's public finances, monetary conditions, the balance of payments and balance-sheet linkages. They may also affect public sector wealth, and have implications for private sector behaviour. Well-designed SWFs can support sound fiscal and monetary policies, and mitigate Dutch disease effects. At the same time, SWFs may also create macroeconomic policy challenges, and appropriate coordination between the SWF and the fiscal and monetary authorities is, therefore, critical to achieve overall policy objectives. At least four policy angles are relevant: fiscal policy, monetary policy, balance sheet implications, and external stability.

(vi) SWFs can play a stabilising role in global financial markets. First, many commentators highlight that as long-term investors with no imminent call on their assets, and with mainly unleveraged positions, SWFs are able to sit out longer during market downturns or even go against market trends. Second, large SWFs may have an interest in pursuing portfolio reallocations gradually so as to limit adverse price effects of their transactions. Third, SWFs' investments may enhance the depth and breadth of markets. Fourth, SWFs could, as long-term investors and by diversifying the global investor base, contribute to greater market efficiency and lower volatility. Currently, SWFs are generally not regarded as highly leveraged and there is little evidence of sudden shifts in portfolio allocations.

(vii) Although SWFs appear to have been a stabilising force thus far, given their size, there are circumstances in which they could cause volatility in markets.

(viii) The shift from reserve assets to SWFs could have implications for the absolute and relative price of assets, the flow of funds between countries and the evolution of global imbalances.

The international standard on government cross-border investments by sovereign wealth funds and other entities should cover at least the following four topics:

Objectives and Investment Strategy: The standard should establish the presumption that the international investment activities of governments are based on clearly stated policy objectives, including how the funds are incorporated into the investment mechanism (or entity), how earnings and/or principal should be spent or redeployed, what types of assets are included in portfolios, how the assets should be managed, where the responsibilities for their management lie, what investment and risk-management strategies should be followed and how these elements can be changed. At the same time, it makes no economic or political sense to think that an investment strategy should be etched in stone although principles of sound public policy suggest that it should not be modified frequently or capriciously.

Governance: The standard should set out clearly the role of the government and the managers of the investment mechanism, what entity sets the policies, how those policies are executed and the accountability arrangements. To the extent that the international investment mechanism is making anything other than passive investments in financial assets (deposits, notes, bonds and non-voting shares), guidelines for corporate governance should be enunciated and followed. Responsibility for ensuring compliance with those guidelines should be clearly established. In some countries, there may also be a desire to have guidelines or a process to

deal with ethical issues, for example, types of activities or circumstances in which investments should not be made, as has been done for Norway's Government Pension Fund Global.

Transparency: The operations of the investment mechanisms should be as transparent as possible. Transparency promotes horizontal accountability among the interested parties and stakeholders (domestic and international) as well as vertical accountability within the policy process. In practice, transparency should involve at least annual reports and preferably quarterly reports. It would be desirable to have substantial quantitative disclosure about investment strategies, outcomes, and the nature and location of actual investments. It would also be desirable subject to the activities of investment mechanisms to published, independent audits.

Behaviour: Depending on the type of mechanism, its size and the scope of its activities, it would be desirable to establish behavioural guidelines with respect to its management. For example, the behavioural guidelines might cover the scale and rapidity with which the entity adjusts its portfolio. They might also create the presumption of consultation with the relevant countries with respect to the allocation among assets denominated in different currencies or located in different countries.

The basic case for the proposed approach rests on two major considerations: accountability and protection. Accountability involves the citizens of the home country, the citizens of the host country (who may distrust the motives of the foreign government) and the international financial community in general, including other participants in global financial markets. Protection is relevant to the managers of the investment entity. The broader the investment strategy of the entity in terms of the risk-reward trade-off, the more likely it is that losses will be made from time to time along with higher overall returns. The aim is to prevent misunderstandings or worse. It is also relevant to other participants in financial markets who do not want to be side-swiped by the actions of governments. Finally, it is relevant to the government of the home country that wants to have maximum freedom to pursue profitable investment opportunities without the risk of intervention by the government or broader political forces in the host country, for example, in the form of financial protectionism.

22.9.4 SWFs and India

In India, the regulatory regime governing capital inflows does not recognise SWFs as a distinct category. Three key concerns are likely to be raised about an SWF for India. One, the country runs fiscal and current account deficits, the latter indicating that saving is short of investment. Two, it has no windfall earnings from commodity exports. Three, overall balance of payments (BoP) surplus in recent years owing to surging capital inflows may not be sustained in the long run. Hence, their investments are subject to normal regulations governing capital flows under the category of foreign direct investment (FDI) and foreign institutional investments (FII). Any SWF can invest under the FDI route (automatic or approval routes, as the case may be) or under FII route either directly or indirectly. In the context of growing developmental needs, particularly of the infrastructure sector, a step in the direction of using a small part of reserves for development has recently been taken after considerable deliberations. An announcement was made by the Finance Minister in the budget Speech 2007–2008 on 28 February, 2007 to 'use a small part of the foreign exchange reserves without the risk of monetary expansion' for the purpose of financing infrastructure development projects. Accordingly a scheme has been finalised which envisages the Reserve Bank investing, in tranches, up to an aggregate amount of USD 5 billion in fully government-guaranteed foreign currency-denominated bonds issued by an overseas SPV of the India Infrastructure Finance Corporation Ltd. (IIFCL), a wholly owned

company of Government of India. The funds, thus raised, are to be utilised by the company for lending to the Indian companies implementing infrastructure projects in India and/or to co-finance the ECBs of such projects for capital expenditure outside India without creating any monetary impact. The lending by the SPV under the arrangement would be treated as external commercial borrowings (ECB) and would be subject to the prescribed reporting and disclosure requirements. The bonds will carry a floating rate of interest. The investment by the Reserve Bank in the foreign currency-denominated bonds issued by the SPV will not be reckoned as a part of the foreign exchange reserves, but will be a foreign currency asset on the Reserve Bank balance sheet.

22.10 DRAWBACKS OF FOREIGN CAPITAL

LO 8
Show the drawbacks of foreign capital

Micro-Economic Distortions and Macro-Economic Instability: Foreign capital usually does not produce an efficient outcome because of the microeconomic distortions and macro-economic instability it generates. The externalities associated with country risk and the credit rationing tend to distort the perceived private cost of the foreign capital. It also induces the growth of improper financial intermediation. Consequently, the resources associated with its inflows are often devoted to consumption which has a low social value, or they are often invested in projects that generate low social returns. The use of foreign capital, thus, often involves inefficient allocation of resources and distortions in the structure of production.[6]

There is enough evidence and experience to show that not all international lending has been carried out with due caution based on strict project appraisal. The international capital flows have hardly contributed much in terms of the increase in productivity, employment and growth in the recipient countries. In fact, it has been found that the increasing volume of international financial flows have been associated with a decline in the trade volume due to higher costs, which, in turn, have been caused by the higher level of credit risk, liquidity risk, interest risk, and exchange rate risk. The wealth has been forsaking productive capital formation, and has been seeking the speculative investment due to these flows.

Volatility: Another harmful impact of these flows has been to increase the instability or volatility in the exchange rates, assets prices, interest rates and the whole economic system of the recipient countries. The global capital flows are essentially unstable, uncertain, unsustainable and easily or quickly reversible, and this tends to destabilise the domestic economies of the recipient countries. The volume, timing and composition of capital flows are uncertain because they are very much determined by supply or push factors which are not amenable to policy control in the host countries. In addition, the internal factors such as the loss of the host countries' creditworthiness tend to stop them quickly. In fact, due to such factors, the inflows are often replaced by substantial outflows.

The capital inflows find their way into the banking system, push up the domestic money supply and expenditures, accentuate the domestic inflation, increase the production of non-tradables at the expense of tradables and increase the current account deficit. When they are reversed, assets prices decline, interest rates jump up, liquidity crunch develops, domestic currency depreciates, and all this tends to build up in veritable

[6]Ferandez Arias, E; and Montiel P J, 'The Surge in Capital Inflows to Developing Countries: An Analytical Overview', *The World Bank Economic Review*, January 1996.

and serious BOP crisis. The increased uncertainty and risk due to all this instability leads to a fall in the productive investment.[7] In this context, it is sometimes argued that it is the short-term or the hot capital flows rather than the long-term flows which engender volatility. Such a distinction, however, is of little practical relevance because even the long-term inflows create adjustment problems. Most of the available evidence overwhelmingly shows that all international capital flows are inherently unsustainable, mobile, volatile, unstable and destabilising in nature. There is no time-series property that can be regarded as an inherent property of any particular kind of capital flows. All of them are fungible, highly substitutable and endogenous with respect to the external shocks and the internal policies. Attempts to reduce the capital account volatility by administratively limiting only the short-term flows are, therefore, unlikely to be effective. Consequently, the best course of action is to minimise the dependence on the international capital flows *per se*.[8]

Monetary Policy: The global capital flows reduce the effectiveness of monetary policy; they are associated with the loss of monetary control at home. The current surge in these flows has created a major worry for the regulatory authorities about taming the global money. The international capital markets have come to deal in the huge amounts of funds, and in the absence of any global institutional mechanism to perform the 'lender of last resort' function, the possibility of a small shock snowballing into a major crisis has become real. Since the pressures against the exchange rate can quickly become enormous, the central banks are faced with the prospects of a run on their currencies, and of being ineffective in spite of massive intervention.

Economic Cost: The cost of foreign finance is rather difficult to measure, and it is subject to a great variability. Foreign currency borrowings imply a series of uncertainties due to floating interest rates and varying margins. There is no special cost advantage in relying on the external funds, especially when the availability of the concessional finance to all the developing countries has now considerably dwindled, and the interest rates in many countries such as France, the United Kingdom and Germany are either higher or comparable, and also increasing. The dramatic shift from the aid, gifts and assistance to the commercial capital clearly reflects the shift in the motivation of the suppliers of capital. This is an important reason for exercising utmost restraint while seeking to raise funds abroad.

Non-Economic Costs: The non-economic costs of the foreign capital are also unaffordable. It is well-known but conveniently forgotten that the foreign capital creates a large number of very serious problems of foreign ownership and control, dumping of technology, loss of autonomy of domestic policies, dependence, hegemony and neocolonialism. Similarly, its use requires elaborate documentation and administrative formalities. The practices in foreign markets keep on changing which increases the information costs.

The existence of a contrary belief notwithstanding, the foreign equity capital is not free from the costs and harmful effects discussed above. In fact, the relevance of what has just been said is all the greater in its case. The theoretical merits of the foreign equity *vis-a-vis* the debt capital are hardly experienced in practice; its very few advantages are easily surpassed by its many disadvantages. There is much serious evidence against the optimistic view of the foreign equity capital. In India, a section of the industry has already become concerned about the increasing holdings of the FIIs in the companies. Associations such as the FICCI and the CII have raised a strong voice against the growing hold of the FIIs. They have cautioned the Indian companies against the GDR and FII options. With their holdings of 40 percent or above, the industry fears

[7]Carbo, V and Hernandez, L, 'Macroeconomic Adjustment to Capital Inflows: Lesson from Recent Latin American and East Asian Experience', *World Bank Research Observer*, February 1996.

[8]Claessen, S, and others, 'Portfolio Capital Flows: Hot or Cold?' *World Bank Economic Review*, January 1995; and Bhole L M, *Financing of Private Corporate Sector, In India*, Himalaya Publishing House, Mumbai, 2000.

that the FIIs may even take over the Indian companies. Foreign equity capital does not come free; it is, in fact, costlier than the debt capital. It gives rise to a larger drain of resources; its non-economic costs are phenomenal; and it is most unsustainable and volatile. The experience in the recent past has confirmed that the expansion of the international equity markets and the growth in their interdependence has increased the risk of spreading shock waves from one market to another at an incredible speed.

SUMMARY

- Foreign capital is said to fill the domestic savings gap, reduce the foreign exchange barrier, and provide superior physical and managerial technology.
- The major forms of foreign capital are bilateral and multilateral (official) concessional assistance, and private commercial debt and equity capital.
- The major determinants of foreign capital flows are current account gaps, relative interest rates and profitability, the degree of openness, relative rates of inflation, terms of trade, country rating, government policies, and so on.
- The IBRD (World Bank), ADB, BIS, IMF and NDB are the major multilateral sources of foreign capital for India.
- Euroloans, eurodeposits, eurodollars, euromoney, foreign bonds, eurobonds, FRNs, NIF, eurocommercial paper, euro certificates of deposits, euroequities, ADRs, IDRs and GDRs are the major international financial instruments through which FC flows are effected.
- The capital flows to India have been divided into two broad categories which are: (i) debt creating flows, and (ii) non-debt creating flows.
- The components of long-term external debts include (i) multilateral debt, (ii) bilateral debt, (iii) loans from IMF, (iv) trade/export credit, (v) external commercial borrowings, (vi) NRI deposits, and (vii) rupee debt.
- The non-debt creating capital inflows are: (i) foreign direct investment, and (ii) foreign institutional investment.
- Foreign direct investment is defined as the investment by a foreign company in a hosting country by setting up a wholly subsidiary or getting into a joint venture for the business.
- Foreign institutional investment is defined as the investment made by a foreign investor in the shares of company that is listed in hosting country or in bonds offered by the hosting country.
- Foreign investment inflows include direct investments and portfolio investments, which, in turn, include GDR/IDRs, investments by FIIs, offshore funds and others.
- The multilateral external debt of India has been always higher than the bilateral debt.
- Percentage of short-term debt has been increasing continuously throughout the period.
- The concessional debt as a percentage of total debt has declined continuously, which imply that debt service burden of the country is increasing.
- FCNR(B), NR(E)RA and NR(NR)RD are the three major types of NRI deposits at present, and each of them contributes to total deposits more or less equally.
- On the basis of certain indicators of debt sustainability for India it has been argued that her external debt situation is comfortable; India is unlikely to fall in debt crisis or debt trap.
- Country-wise, Mauritius, Singapore and the United Kingdom are the major FDI investors in India.

- During the current period, majority of shares are coming to India through automatic routes.
- The sectors which have been the major beneficiaries of the actual FDI inflows have been telecommunications, energy, electrical equipment, transport industry, chemicals and the services sector.
- Sovereign wealth fund (SWF) is a state-owned investment fund composed of financial assets such as stocks, bonds, real estate or other financial instruments funded by foreign exchange assets.

KEY TERMS

Foreign capital
World Bank
International Monetary Fund
Asian Development Bank
Bank for International Settlement
New Development Bank
Global depository receipt
American depository receipt
Euro issues
External commercial borrowings
Foreign direct investment
Foreign institutional investment
Trade credit
External assistance
Sovereign wealth fund

QUESTIONS

1. How has the foreign capital been used for the economic development and what are its major determinants?
2. What are the different sources through which the foreign capital is available?
3. Write a note on the nature and functions of the multilateral institutions such as World Bank, IMF, ADB and BIS which supply foreign capital for different purposes.
4. Explain the nature and characteristics of various international financial instruments through which the foreign capital can be mobilised.
5. Analyse the trends in components of foreign capital in India?
6. What is the difference between FDI and FII?
7. Write a short note on NRI deposits in India.
8. What are the future prospects for the substantial inflows of the foreign capital to India?
9. What are the debt sustainability indicators and present the synoptic view of this for India?
10. Highlight the different policy measures taken to increase the FDI in India.
11. What are the drawbacks of foreign capital inflow?
12. What is sovereign wealth fund (SWF) and what are the benefits and limitations of SWF?
13. Analyse the trends in development of SWFs in India and abroad.
14. Write short notes on following:
    (a) Foreign direct investment
    (b) Foreign institutional investment
    (c) Concessional debt
    (d) Euro issues
    (e) Sovereign wealth fund

Part 7

Interest Rates

This part is devoted to comprehensive and in-depth analysis of determination of interest rates. There are two chapters in this part. The first chapter explains various theories of interest rate determination such as classical theory, loanable fund theory and Keynesian theory. It also analyses the different-term structure theories of interest rate like expectation theory, liquidity premium theory, market segmentation theory and so on. The second chapter is devoted to the discussion on the interest rate system, deregulation of interest rates, features and trends in the nominal and real short-term and long-term interest rates, relationship between changes in interest rates and other macroeconomic variables and determinants of savings and investments in India.

CHAPTERS

23. Theories of the Level and Structure of Interest Rates

24. Interest Rates in India

Theories of the Level and Structure of Interest Rates

23 CHAPTER

Learning Objectives

- **LO 1** Know the level of interest rates
- **LO 2** Understand the structure of interest rates
- **LO 3** Explain the theories of the term-structure of interest rates
- **LO 4** Discuss other factors affecting term-structure of interest rates
- **LO 5** Review the determinants of the general structure of interest rates

23.1 INTRODUCTION

The working of various parts of the money market and capital market has been discussed in the previous chapters. The behaviour of interest rates pertaining to different financial instruments has also been discussed in brief. We will now try to bring together the different strands of discussion of yield rates so that a unified picture of the behaviour of interest rates in respect of their level and inter-relationship may emerge. This and next chapter is devoted to this task. The theories of the level and structure of interest rates will be discussed in this chapter, and the behaviour of interest rates in India over a period of about 40 years will be analysed in the next chapter.

Although economists are fond of talking of the rate of interest in the economy, actually there are a bewildering variety of interest rates in the financial markets of any economy. On the basis of the periods of maturity of different financial instruments, interest rates on them are broadly grouped—either as short-term rates, such as bank rate, treasury bill rate, call rate, *hundi* rate, bazar bill rate, short deposit rates, commercial bill rate, banks' advance rate, and so on, or, as medium- and long-term rates, such as fixed deposit rates of banks, public deposit rates, term loans rate, yield rate on government securities, industrial debenture yield, UTI dividend rate, yield on ordinary shares, and so on. There are also various concepts like the ceiling rate of interest, coupon rate, yields such as income yield, running yield, market yield, redemption yield, earnings yield, dividend yield, gross yield, net yield, and so on. The ceiling rate refers to the maximum rate of interest fixed by the authorities on different claims. In India, the government and the RBI fix ceilings on a number of interest rates. Where financial markets work on the basis of competition, the practice of fixing a ceiling is rare, although it may not be altogether absent. For example, in the U.S., the rate of interest on government

securities is subjected to the ceiling fixed by the government. The ceiling rate is always fixed with respect to the face value of the financial instrument; as such, it is always the coupon rate and not the yield (market or redemption) that is subjected to a ceiling.

The coupon rate which is also known as the 'bond rate' is the rate of interest stated and paid on the face value (i.e. par value) of the bond (debenture). The 'yield' is a general concept represented by that rate of interest that equates the present value of the future cash flows generated by an investment (including the principal when repaid) with the cost of investment. Running yield on bond (which is variously known as income yield or market yield or current yield) is the annual interest payment as a proportion of the market price of the bond; while yield to maturity or redemption yield is the annual interest payment plus average annual appreciation or depreciation (due to the difference between the face value and the value at which the bond is bought) as a proportion of the redemption value (which is equal to the face value) of the bond. Dividend and earnings yield are concepts usually used in evaluating investment in ordinary shares. The dividend yield is the dividend per share (gross of tax) in the hands of the investor as a proportion of the current share price, while earnings yield is the distributable earnings per share of the company as a proportion of the market price of the share. The yields can be arrived at on gross or net (of tax) basis. While the gross yield is more relevant for measuring the cost of capital to the firm, the net yield is more useful in gauging the effective rate of return available to the investor.

23.2 LEVEL OF INTEREST RATES

LO 1
Know the level of interest rates

Interest is the price the borrowers must pay to lenders to obtain the use of money for a period of time. As all the other prices are determined in different markets, the equilibrium rate of interest is also determined by the forces of supply and demand in the financial markets. The question is: the supply of and demand for what? Different people have answered this question differently which has given rise to different theories about the determination of the rate of interest. We discuss briefly below three such theories about interest rates: (i) The Classical Theory, (ii) The Loanable Funds Theory, and (iii) The Keynesian Theory.

23.2.1 The Classical Theory

This theory is associated with the names of Ricardo, Hume, Fisher and others. It is a static theory, and, according to it, the rate of interest is a real phenomenon in the sense that it is determined by the real factors. It is the supply of savings and the demand for investment that determine the equilibrium rate of interest. The aggregate saving is the difference between the total national income and the total consumption expenditure. The savings may be affected by individuals, households, business and the government. Given the current income, there is a natural or normal tendency on the part of economic units to spend that income on current or present consumption that is there is a time preference in favour of present rather than future consumption. To the consumer, business and government, money now is not the same thing as money next year; the money now is valued more than the money next year.

Because of this time preference, if it is necessary or desired that the current consumption should be postponed, there is a sacrifice involved in such a postponement. The various economic units can be induced to undergo

this sacrifice and save if they are offered a reward for such an action. This reward is known as the 'rate of interest'. Thus, interest rate is a reward for sacrifice or abstinence or waiting involved in the act of supplying savings. Interest rates are intimately involved with the role of time in economic activities and in the lives of economic units. They arise out of, and in a sense they measure, the preference for the present over future. Irving Fisher, particularly, emphasised time preference or impatience or waiting or abstinence as a factor limiting the supply of saving. If people did not care about time, they would save more of their incomes so long as interest rate was positive. The existence of time preference is necessary to explain the existence of the interest. For greater savings, higher rate of interest needs to be offered. There would be no saving at zero rate of interest, and greater and greater saving could be induced by offering higher and higher interest rates.

On the demand side, firms and other economic units demand capital to make profits by producing goods. The investment takes place because by investing in roundabout or indirect methods or processes of production, economic units expect to obtain more consumption in future by sacrificing present consumption. The opportunities, to produce more effectively by using roundabout methods of production, determine investment demand.

While the saving schedule is upward sloping, the investment schedule is downward sloping. The equilibrium rate of interest is determined by the interaction of these savings and investment schedules in the economy. The classical view thus 'regards interest as determined by demand and supply, the productivity of capital goods providing the main elements of demand and the supply of capital being limited by the reluctance to abstain from current consumption and do more saving'[1]. The rate of interest so determined is variously known as the 'natural rate', 'full-stock equilibrium rate', 'classical real rate' and 'true real rate'. In a static situation, this rate is not affected by the level of money and prices because changes in the quantity of money lead to a proportionate change in all prices, leaving the percentage ratio of money yield to money principal unchanged. Interest rates are not influenced by the behaviour of banks and other credit institutions.

The classical theory of interest abstracts from innumerable factors which are known to be of importance in any economy, in reality. For example, it rules out economic fluctuations, it assumes perfect price flexibility and it rules out cost-push inflation. The perfect competition underlying the theory is hardly to be met in financial markets. There are certain market conditions which impede free flow of funds. For example, the stock of securities already outstanding may influence the quantity of new securities supplied and demanded; information does not flow freely and instantaneously and transactions are not cost-free. Technological changes that are continuously occurring in the economic system tend to raise the return to capital and thereby affect equilibrium interest rates. The existence of risk and uncertainty about the future in real life means that interest rates in real life will not be pure or risk-free rates as posited in the classical theory, but the level of interest rate would be equal to the pure rate plus the appropriate measure of the risk-premium.

Further, the absolute adherence to the concept of time preference ignores other reasons behind savings, such as smoothening expenditures from year to year when income varies, or accumulating funds for retirement. The classical saving function is postulated for a given full employment level of income. At less than this level of income, the ability to save may diminish and the amount of saving may decline. Accustomed to certain levels of consumption, people tend to reduce their saving drastically to maintain their lifestyles when the income temporarily declines. This suggests that income level has a powerful impact on interest rates via its

[1]Samuelson, P A, 'Money, Interest Rates, and Economic Activity: Their Interrelationship in a Market Economy', in Gibson, W E, and Kaufman, G G (eds.), *Monetary Economics: Readings in Current Issues*, Tata McGraw-Hill, New Delhi, 1975, p. 51.

influence on savings. The balanced approach would be to say that for a given level of income, an increase (decrease) in interest rate increases (decreases) desired saving to a certain extent, but there are also changes in savings that are income-generated.

23.2.2 The Loanable Funds Theory

The loanable funds theory of interest rate determination makes certain important modifications in the classical theory. It is a dynamic theory as opposed to the static nature of the classical theory. It also combines real and monetary factors as determinants of the rate of interest. Further, it takes a more short-run view of the process of interest rate determination in place of the secular or long-run view taken by the classical theory.

Once we make dynamic assumptions regarding the creation of money and credit, the following two positions of classical interest theory necessarily need to be modified: (a) though interest is paid in money terms on money loans and assets, the level of interest rate has nothing to do with the levels of money and prices, and (b) the commercial banks are a mere conduit for the more efficient channelling of saving into the best investment outlets, they cannot affect the level of interest rate. The loanable funds theory discards the independence of the interest rate from the behaviour of money and banks. According to this theory, the real supply and demand curves determining interest rates should have added to them as a component of the supply of saving which is associated with the creation of new money or credit.[2] The supply of credit may be from banks and/or other financial institutions in the economy. The demand for credit would be for financing investment plus holdings (hoarding) of idle cash, i.e., for increasing the cash ratio by different economic units. The rate of interest clears the market for savings plus credit.

In the short run, banks and other financial institutions have a great deal to do with increasing the flow of capital formation and reducing the market rates of interest. The banking and non-banking financial agencies are actually in a position to create loanable funds which they lend out to the would-be investors in the productive physical assets. This changes the mix of the national income towards capital formation and away from current consumption. Similarly, the expansionary monetary policy can keep investment spending higher than what would be the case in the absence of central banking. This occurs without reduction in current consumption because consumption is also higher than what would be the case in the absence of expansionary monetary policy.

23.2.3 The Keynesian Theory

If the classical theory represents one extreme, the Keynesian theory represents the other extreme approach to the determination of interest rate. According to Keynes, interest rate is a purely monetary phenomenon. This means that the rate of interest, at least in the short-run, is determined by the monetary factors, that is, it depends on the actions of the monetary authorities (the Central Bank and the Government), and on the attitude of economic units towards holding money as an alternative to holding bonds. In other words, interest rate is determined by the interaction between the supply of money and demand for it (to hold) in the economic system.

The rate of interest is the reward offered to people to induce them to hold securities instead of cash. Cash is perfectly liquid and safe in the sense that there is no danger of physical deterioration or capital loss. On the

[2]Samuelson, P A, *op. cit*., pp. 51–53.

other hand, securities can and do vary in value and, therefore, there is a risk of incurring capital loss when securities rather than cash are held. Interest is the difference between the yield on safe money and the yield on risky securities; it arises or exists as a price or inducement for giving up liquidity of holding money in favour of holding securities.

The demand to hold money is called the 'liquidity preference'. There are three motives or reasons behind the demand for liquidity or liquidity preference of individuals, firms and institutions. They are: (a) transactions motive, (b) pre-cautionary motive, and (c) speculative motive. Both business firms and individuals hold ready cash in order to be able to affect day-to-day transactions needs that arise because of non-synchronisation of receipts and payments. The economic units hold some cash for the purpose of providing for a rainy day or unforeseen difficulties or contingencies or even accidents. Finally, some cash is held by them with a view to benefit from changes in the future (expected) interest rates and securities prices. The total demand for money is the sum of cash desired to be held by all economic units for all these motives.

The supply of money in the modern economies is said to be under the ultimate control of the monetary authorities. Keynes himself proceeded with the assumption that money supply in the economy is exogenously determined, that is, it is determined by the monetary authorities. The demand and supply of money determines the rate of interest. To lower the rate of interest, it is necessary to increase the supply of money or to reduce the demand for it or to do both.

Among these different theories, which one should we choose? We think that an eclectic approach accepting interplay of the real and monetary factors in determining the rate of interest would be closer to the realities of the actual economic systems. In the short-run, changes in money supply may produce an opposite effect on the level of the interest rate. Over a period of several months, somewhat longer-lasting forces interact to determine the level of interest rate. These forces are related to changes in economic activity, income, and prices. When interest rates go down as a result of an increase in the money supply, there may be a stimulation of economic activity and an increase in the national income. This increase in income tends to offset the initial decline in yields and may subsequently raise them. If the increase in money supply exceeds the rate of increase in income, and if it is accompanied by market imperfections of diverse kinds, there may be a large increase in prices which may further push up the nominal rates. The actual level attained by the interest rate may also be subjected to direct intervention by the authorities in the market for loanable funds. In the long-run, however, the forces of thrift and productivity must come into their own in determining the rate of interest.

23.2.4 Interest Rate and Price Level

The relationship between the rate of interest and the price level has proved quite intricate and controversial in economic literature. According to classical theorists, the equilibrium real rate of interest is independent, that is not affected by changes in the price level. However, the nominal or market rate of interest is posited to be inversely related to the price level; the lower the market rate the higher the price level, and *vice versa*. This inverse relationship between prices and interest rate arises because of the emergence of a disparity between the 'natural rate' and the 'market rate' of interest. As the 'natural rate' is expected to be fairly stable over time, the upward movement in the 'market rate' results in exceeding the 'natural rate', causing a deflationary gap between the desired investments and saving, and consequently a fall in prices. The market rate is determined

by the Central Bank which, by directly setting it at a level below or above the real rate, can generate a cumulative process of inflation or deflation. The Central Bank can alternatively determine it indirectly by increasing the quantity of money which will create excess reserves with banks that will then be willing to lend at a lower rate of interest.

In practice, interest rates and prices have often moved together in the same direction in many economies, a fact that is contrary to the classical theoretical position. This contrast was first pointed out by Gibson and was therefore designated as the 'Gibson paradox' by Keynes. Does this paradox invalidate the classical relationship between prices and interest? Is it possible that it was conceived by the classical theorists themselves? According to Wicksell, in periods of rising interest and prices, the natural rate has been high and the market rate has lagged behind the natural rate. A rising market rate means that banks have been trying to adjust it to the natural rate, but have not been able to do so sufficiently, as a result of which, in a dynamic transitional state, there occurs an expansion in bank credit leading to rise in prices.[3]

Another explanation for the positive relationship between prices and interest is provided in terms of what has come to be known as the 'Fisher effect'. According to Irving Fisher, a cumulative rise in prices, after some time-lag, generates expectations of a further rise in prices. This makes investors willing to lend only at a higher rate of interest in order to protect themselves against depreciation in the value of money. Interest rates and prices, therefore, tend to rise or fall together. It may be pointed out that the two explanations are dissimilar because while, according to Wicksell, the upward movement in the market rate is a matter of adjustment with the natural rate and the rise in prices is a result of the difference between the two rates. According to Fisher, an upward movement in the market rate is caused by the expected rise in prices.

23.3 STRUCTURE OF INTEREST RATES

LO 2
Understand the structure of interest rates

The theories of the determination of the general level of interest rate discussed above do not explain the actual working of the market for funds and the complex variety of interest rates existing in any financial system. For this purpose, what is more relevant is to seek answers to the following two questions:

What is it that determines the difference between long-term and short-term interest rates that is what is it that determines the term-structure of interest rates? The 90-day treasury bill rate was 7.96 percent in 1996–1997, while the yield on long-term government securities (over 15 years of maturity) was about 13 percent in the same year. Why do securities maturing at different lengths of time offer different yields?

What is it that determines the general structure of interest rates? In 1997–1998, while the government of India could issue 10-year bonds at the coupon rate of 13 percent, the private sector joint-stock companies had to offer 15 percent interest rate on their 7-year bonds, and 15 percent on their 3-year fixed deposits. Why?

The following theories of the structure of interest rates throw some light on questions such as these.

[3]Patinkin, Don, *Studies in Monetary Economics*, Harper, New York, 1972, p. 84.

23.4 THEORIES OF THE TERM-STRUCTURE OF INTEREST RATES

LO 3

Explain the theories of the term-structure of interest rates

The term-structure of interest rates refers to the relationship between different rates when all the investment characteristics (such as the default risk, marketability and liquidity and tax status) except the length of time to maturity of the financial claims are held constant. It is the name given to the functional relationship between the yield and term (period) to maturity. The main theories pro-pounded to explain this relationship as follows:

23.4.1 The Expectations Theory

This theory has taken two forms: restrictive and broad. In its restrictive form, it is known as the unbiased or pure expectations theory, and it is based on the following assumptions:

- There is perfect competition in financial markets.
- The investors are rational, that is, they wish to maximise the yield of their holding period.[4]
- Investors have a perfect foresight, and a large enough body of investors hold uniform expectations about the future level and changes of short-term interest rates and security prices.
- There are no transactions costs.
- Securities of different maturities are perfect substitutes for each other, that is, they are homogeneous.

With the help of these assumptions, it is posited that today's long-term rate is the unbiased (arithmetic or geometric) average of the current short-term rate and the successive forward or expected one-period short-term rates during the period of long-term loan. It is represented as follows:

$$(1 + R_n^t) = [(1 + R_1^t)(1 + r_1^{t+1}) \dots (1 + r_1^{t+n-1})^{1/N} \tag{23.1}$$

Where:

R_n = The actual long-term rate

N = Term to maturity

t^{R_1} = Current one-year rate

$t + i^{r_1}$ = The expected one-year yield during some future period, $t + i$, is also known as forward rate.

We can compute the one-period forward rate beginning at time $t + n$ and implied in the term-structure at time t is

$$1 + r_{1t}^{t+n} = \frac{(1 + R_{1t}^t)(1 + r_{1t}^{t+1}) \dots (1 _ r_{1t}^{t+n})}{(1 + R_{1t}^t)(1 + r_{1t}^{t+1}) \dots (1 + r_{1t}^{t+n-1})}$$

$$= \frac{(1 + R_{n+1}^t)^{n+1}}{(1 + R_n^t)^n}$$

$$r_{1t}^{t+n} = \frac{(1 + R_{n+1}^t)^{n+1}}{(1 + R_n^t)^n} - 1 \tag{23.2}$$

[4]Holding period is the period of time for which the investor plans to hold or actually holds the security. It may be the same as the maturity period or it may differ from the latter. If it is longer than the maturity period, the investor must reinvest; if it is shorter, he must sell the security before the maturity period is over

Where r_{1t}^{t+n} is the one-year forward rate prevailing at $t + n$, using the term-structure at time t.

The general formula for computing the j-period forward rate beginning at time $t + n$ as of time t is:

$$r_{jt}^{t+n} = \sqrt[j]{\frac{(1+R_{n+j}^{t})^{n+j}}{(1+R_{n}^{t})^{n}}} - 1$$

Example Suppose the seven-year spot rate is 15 percent and six-year spot rate is 13 percent. The forward rate one-year from now implied by these spot rates can be calculated as follows:

$$\frac{(1+t^{R_7})^{7}}{(1+t^{R_6})^{6}} - 1 \text{, putting the spot rates in Eq. (23.2)}$$

$$= \frac{(1+0.15)^{7}}{(1+0.13)^{6}} - 1 = \frac{(1.15)^{7}}{(1.13)^{6}} = 0.277 = 27.7 \text{ percent}$$

The long-term rate will be higher than the short-term rate (i.e. the yield curve will be upward sloping) only if investors expect future short-term spot rates to be higher than the current short-term spot rates. Similarly, the long-term rate will be lower than the short-term rate (the yield curve will be downward sloping) when investors expect future short-term spot rates to fall below the current short-term spot rates. If no changes in future short-term spot rates are expected, the long- and short-term rate will be equal to each other (the yield curve will be flat). In equilibrium, short-term rates cannot be different from long-term rates because the competition equalises yields on all possible configurations of investment over the same time span or horizon. If this condition is not fulfilled, profitable arbitrage operations will ultimately bring it about. It is through variations in the price of bonds outstanding that yields calculated for the same period will be equalised for bonds with different terms to maturity.

Thus, the pure expectations theory views expectations about the future short-term interest rates as the only determinant of the term-structures of interest rates. These expectations determine the demand for securities which affects their prices which, in turn, determine their relative yields. The relative supplies of securities in various ranges of maturity spectrum do not change and affect yields as per this theory. It holds that it is not possible to influence term-structure of rates by varying the supply of securities of different maturities. While the only merit of this theory is that it has emphasised the role of expectations. It suffers from too many serious drawbacks to make it useful in explaining the structure of interest rates in practice.

First, it totally lacks realism. Its assumptions are very restrictive and unrealistic. It cannot explain rates structure in informal and rural markets where there is no trading of securities in the manner assumed by it. Similarly, it appears to be irrelevant with regard to interest rates on bank deposits where there is no buying and selling of securities. A very practical question that can be raised is that if the expected return is the same irrespective of the maturity chosen, why do investors hold securities of different maturities? The unrealism and irrelevance of this theory is also reflected in the fact that while it implies that the central banks cannot affect interest rates through open market operations, in practice, central banks do use this technique to influence relative supplies of securities and yields on them.

Second, while this theory allegedly explains the long-term rate, it does not explain how short-term rates themselves are determined and how expectations about short-term rates are formed. Similarly, the theory

is silent about the role of expectations about the future long-term rates and prices in determining the term-structure of interest rates. It has been rightly pointed out by Dorrance and Hicks that it is much more realistic to talk of the structure of interest rates in terms of expectations about future long-term rates, since the speculators in long-term bonds must normally be concerned with their prices rather than short-term rates. By assuming that a participant in the market has expectations about the price of the long-term bond at the date when the short-term security falls due, we get along well with the simple comparison of the current short-term interest rate with the yield on the longer-term bond expected for the same time span.[5]

Third, a critical reading of this theory reveals that it really states how expectations can be derived from the observed yield curve rather than how yield curve can be constructed with the help of expectations. It utilises the currently observable yield structure to derive what current expectations of forward rates are; the theory does not use expected forward rates to explain the current level of the long-term rate. Thus, we set out to explain the term-structure with the help of expectations but end up with deriving expectations with the help of term-structure—a clear case of the cart before the horse.[6] It is to be noted that this theory does not say anything about what can be the shape of yield curve theoretically. It merely helps to interpret the meaning of various yield curves. It does not explain what determines the holding period, also; it implicitly assumes that the holding period is independent of considerations of risk, return, liquidity and so on.

23.4.2 Liquidity Premium Theory

The main proponent of this theory is J R Hicks. Some people view it as an extension or modification of the pure expectation theory and, therefore, it is sometimes called a biased expectations theory. Two important characteristics of investments are return and risk. The choice of securities depends upon the risk-return preferences of the investors. The expectations theory ignores risk and assumes that investors want to maximise return. The segmentation theory, which we will discuss, assumes that investors de-emphasise return and try to minimise risk. The liquidity premium theory assumes that investors are risk-return traders; they do not want to maximise return, whatever the risk is. Similarly, they do not want to minimise risk even if it entails a very low return.

This theory also holds that long-term securities, on balance, are more risky than short-term securities. While the variance of return of capital value is greater for long-term securities than for short-term ones, the variance of return of interest income is greater for short-term securities than for long-term ones. If it is assumed that the stability of capital is valued more highly than the stability of interest, the long-term securities have a net risk disadvantage. Investors will accept this additional risk only if long-term securities are priced in such a way as to offer a higher yield. In other words, because of the higher risk on long-term securities, other things being equal, the investors prefer to lend short-term securities. Borrowers, on the other hand, prefer to borrow long-term securities in order to reduce the risk of inability to meet principle payments that is in order to reduce the 'financial risk'. Due to this psychological disinclination to hold long-term securities, a positive liquidity or risk premium must be offered to induce investors to purchase long-term securities. This premium is over and above the average of the current and expected short-term rates. Thus, this theory implies the existence of the upward sloping yield curve more often rather than non-existence. The liquidity premium theory is represented as follows:

[5]Lutz, F A, *The Theory of Interest*, D Reidal Co., Dordrecht, Holland, 1967, pp. 218–219.
[6]Henning, C N, and Others, *Financial Markets and the Economy*, Prentice-Hall, Englewood Cliffs, New Jersey, 1978, p. 386

$$(1 + R_N^t) = [(1 + R_1^t)\,(1 + r_{1t}^{t+1} + L_2) \ldots (1 + r_{1t}^{t+N-1} + L_N)]^{1/N} \tag{23.3}$$

L represents the liquidity premium and it is expected to increase with maturity as the volatility increases with maturity.

The liquidity premium theory highlights the preference for liquidity and the desire to minimise the sum of income capital risk as the additional factors determining the term-structure of interest rates. It is more realistic because it incorporates the complexity of forces such as lenders' and borrowers' preferences, and differences in risk-return attributes of securities of different maturities. It has served a useful purpose so far as it has exposed the fact that even in respect of securities with no default risk, other types of risks remain present, and the greater the risks the longer the maturity period. It may, however, be added that in the context of discussing term-structure of interest rates, liquidity premium, strictly speaking, is not a correct nomenclature because the premium that needs to be paid to lenders is for inducing them to take greater risk and not for parting with liquidity. It is also doubtful whether the investors are really more averse to capital risk than to income risk. One wonders that whether such an assumption is really necessary. The logic of the theory of portfolio selection and the empirical evidence suggest that long-term securities have greater systematic risk[7] than the short-term ones which, rather than investor bias against capital risk, explains higher expected return on long-term securities than on short-term ones.[8]

Similarly, this theory is not explicit about the cause or origin of the change in the value of the principal. Is it the change in 'real value' or 'nominal value' of capital which is indicated by the theory? As we know, while the real value would change due to changes in prices, the nominal value would change due to expected changes in interest rates. The theory lacks clarity in these matters. Further, by assuming that the risk (liquidity) premium will be mostly positive, the theory implies that the prices or interest rates will be mostly increasing. This is questionable.

23.4.3 Market Segmentation Theory

The third major theory of term-structure of interest rates is the market segmentation theory propounded by Culbertson. Lutz has called it the theory of risk avoidance. The theory assumes investors to be risk minimisers or risk-averters.[9] The way to minimise risk is to match maturities of assets and liabilities or to match maturities with holding periods. If a lender knows exactly how long his money will be available for investment, he can select the maturity date of the claim in such a way that he runs neither the income risk nor the capital risk. The co-incidence of the maturity date of the claim with the date of his need for cash insures him against both these risks. All these results in the capital market being divided into a number of segments in which demand for and supply of funds of each given maturity determine the rate of interest irrespective of what happens in other segments. The market segments may also be created on account of certain legal restrictions on investment selections of certain institutional investors. Of course, these segments are not totally independent of each other. Although some amount of inter-dependence between various segments is

[7]Systematic risk is the deviation of realised return from expected return on an efficient portfolio due to the tendency for rates of return on individual securities and portfolios to move with the rate of return on the market as a whole. In other words, it is the risk which cannot be reduced by diversifying the investment portfolio.

[8]Robinson, R I, and Wrightsman, D, *Financial Markets*, McGraw-Hill, New Delhi, 1981, pp. 164–165.

[9]Risk averters prefer to forgo possible capital gains in order to escape capital losses and they decline possible higher returns to avoid possible lower rates.

admitted, this theory holds that securities in different maturity ranges, particularly in more distant maturity ranges, are imperfect substitutes for each other. In other words, although the theory does not deny the possibility of some market continuity and some maturity indifference, it holds that institutions may have to be paid a differential premium to induce them to move from their preferred maturity segment. Moreover, this premium can be in either direction; it is not confined necessarily to the long side, as implied by Hicksian liquidity premium.

In such segmented markets, the term structure of interest rates is determined exclusively by the supply of and demand for securities. If on the demand side, demands for long-term capital were to pre-dominate and on the supply side, the offer of short-term money, the long-term rates would come to lie above the short-term rates, and *vice versa* in the opposite case. This theory, thus, stresses the maturity structure of debt as an important factor determining the term-structure of interest rates. As per this theory, debt management policies of the government and changes in the economic structure can influence the rates structure.

Although the market segmentation theory has added an important dimension to the explanation of interest rates structure, it is difficult to accept that lenders and borrowers are dominated only by the desire to avoid risk. In reality, the investors care for the return also. It is difficult to accept that an investor would select the maturity with the smallest total yield-risk without comparing risks with yields that is to assume that he would attempt to avoid risk at any price.

23.5 OTHER FACTORS

LO 4

Discuss other factors affecting term-structure of interest rates

Apart from the factors pointed out by the three theories, there are other factors that are relevant in explaining the term-structure of interest rates. One such factor, to which many analysts pointedly draw attention to, is the phenomenon of current and expected inflation. It is held that the generally ascending yield curve might be the result of inflation uncertainty.[10] The expectations theory and liquidity premium theory assume that future inflation rates are known with certainty. In reality, this is not true, and inflation uncertainty increases with the length of time in future. This inflation uncertainty causes uncertainty about interest rates. All it means that investors cannot make completely risk-free investments and the risk of investment increases as the period for which investors are required to make forward commitments of their funds lengthens. The least-risk strategy for them is to invest in successive one-year bonds. This means that borrowers must offer some incentives if they want investors to lend long-term investments. Thus, inflation risk renders long-term rates to be higher than the short-term rates.

The existence of transactions costs has been pointed out as another relevant factor in the present context. The impact of transactions costs on term-structure, however, has to be regarded as uncertain. This impact is the result of two opposing forces. According to the first, given the holding period, the transactions costs are lower, the longer the term to maturity because the number of transactions would be lower. According to the second, the transactions costs tend to increase with the length of time to maturity because of the greater risk of long-term securities to dealers who make the market. Whether the yield curve would be downward sloping or upward sloping will depend upon the relative strength of these two forces.[11]

[10]Robinson, R I and Wrightsman, D, *op. cit*., p. 165

[11]Van Horne, J C, *The Function and Analysis of Capital Market Rates*, Prentice-Hall Englewood Cliffs, New Jersey, 1970, pp. 80–83.

23.6 DETERMINANTS OF THE GENERAL STRUCTURE OF INTEREST RATES

LO 5
Review the determinants of the general structure of interest rates

Although the term-structure of interest rates has received the maximum (almost exclusive) attention from monetary economists, one must realise that maturity is not the only dimension in understanding the structure of interest rates. Financial economists have rightly emphasised the importance of the following factors in this context.

23.6.1 Default Risk

The risk is one of the most important determinants of decisions in the markets for both financial and real assets. In essence, it refers to the possibility of an adverse outcome to an event. There are many types of risks and we have already indicated how inflation risk, interest rate (capital) risk and income risk cause differences in yields. The default risk is a major determinant of the general structure of interest rates and it refers to the possibility of the failure to meet the terms of a loan agreement, of delay in payment, of total non-payment, of partial non-payment of interest and/or principal amount. All financial assets, except government securities, are subjected to some degree of default risk although they differ in their degree of risk. These differences in risk levels cause differences in interest rates (yields) on financial claims. The more risky the security the higher the interest rate it has to offer. Given the attitude of the investors towards absorption of risk and also given the risk in investment projects that borrowers wish to undertake, the yield on risky assets will rise to an equilibrium position that will be higher than the yield on assets that have no risk of default. The difference between these two yields is called the default risk premium. The default risk is determined by the internal financial and business position of the borrower, and the external environment or economic climate within which he operates.

23.6.2 Call Risk

In the US, most of the corporate bonds are issued with a clause which gives the companies an option or power to call back the bonds at a specified price before they mature. The holders of callable bonds run the risk of their bonds being called back before they voluntarily take their money back. The call practice involves certain disadvantages from the point of view of the investor. First, since the call price sets a ceiling on the market price, holders of callable bonds can hope to earn only a limited amount of capital gains. Second, since bonds are usually called back when market yields are low, the long-term investors have to re-invest their money at lower yields; in addition, they have to incur transactions costs for re-investment. Third, investors face a continuous overhanging uncertainty that the bond may or may not be called back. Therefore, interest rates on callable bonds will have to be higher than the rates on bonds without a call feature. The difference between the two can be called a 'call risk premium'.[12]

In India, the practice of issuing callable bonds is not prevalent. However, the opposite practice, namely, issuing bonds with buy-back option has become quite widespread in the recent past. In this case, the buyers of non-convertible debentures have the option of selling their bonds to the company at face value whenever

[12]Robinson, R I and Wrightsman, D., *op. cit*., pp. 155–157.

they want, after a specified time period. In a free market, interest rates on bonds with buy-back feature can be lower than the rates on bonds without such a feature.

23.6.3 Marketability or Liquidity

The financial assets differ in their marketability or liquidity, that is, they differ in respect of the possibility that a significant amount of security can be sold relatively quickly without large price concessions. Other things being equal, the security which is easily marketable earns a lower rate of interest than the one whose marketability is limited or restricted. The marketability of assets depends in part on the features of the instrument itself and in part on the nature of markets where the assets are traded. Assets, which are homogeneous, appeal to a wide variety of buyers and can be easily transferable without undue cost or delay, have a high degree of marketability. Similarly, if the primary and secondary markets are well developed, if they have depth, breadth, and resiliency, the assets will have greater marketability.

23.6.4 Tax Status

Tax features cause difference in yields on otherwise similar financial assets or claims. The fact that capital gains are taxed at a lower rate compared to income and that different securities differ in respect of tax exemption of interest income and principal amount of investment, result in differences in interest rates on different claims.

SUMMARY

- A variety of short-term, medium-term and long-term interest rates exists in the financial markets of any economy. For theoretical purposes, however, it is conventional to talk as if the economy has *the* rate of interest.
- The yield or the yield rate is the rate of interest that equates the present value of future cash flows generated by an investment with the cost of that investment.
- The running yield or income yield or market yield or current yield is an annual interest (dividend) payment in respect of percentage of the market price of the security.
- The redemption yield is the annual interest payment plus the average annual appreciation of bond value as a percentage of its redemption value.
- The coupon rate is the rate of interest stated and paid on the face value of the bond.
- The Classical theory states that the rate of interest is determined by real factors, namely the supply of savings and the demand for investment, the productivity of capital goods providing the main elements of demand and the people's time preference limiting the supply.
- The Loanable Funds theory posits that the supply of savings plus the credit creation by the financial system on the one hand, and total borrowings in the economy on the other, determine the rate of interest.
- The Keynesian theory states that the rate of interest is a reward for parting with liquidity, and it is determined by the demand for and supply of money in the economy.
- In real life, prices and interest rates are often positively related and are designated as the 'Gibson paradox'.

- The 'Fisher effect' means that a cumulative rise in prices generates positive price expectations which then results in the increase in the nominal rate of interest.
- According to Wicksell, when the market rate of interest is lower than the 'natural rate', prices tend to increase which, in turn, leads to upward adjustment in the market rate of interest.
- The expectations theory views expectations about the future short-term interest rates as the only determinant of the term structure of interest rates.
- As per the liquidity premium theory, investors try to balance risk-return considerations. The long-term investments are more risky than the short-term ones; liquidity or risk premium needs to be offered to long-term investors; and the long-term rates tend to be higher than the short-term rates.
- The segmentation theory holds that financial markets are divided into different maturity-wise segments, and the rate of interest in each of these segments is determined by its supply of and demand for funds.
- The general structure of interest rates is determined by differences in the default risk, call risk, liquidity and marketability and tax status of different financial claims.

KEY TERMS

Rate of Interest	Default Risk	Call Risk
Natural Rate of Interest	Bond Yield	Expectation Theory
Loanable Fund	Yield to Maturity	Market Segmentation Theory
Liquidity Preference	Term-Structure Interest Rate	Forward Rate

QUESTIONS

1. Discuss the role of real forces of thrift and investment in determination of the rate of interest.
2. In what respect is the loanable funds theory of interest an improvement in the classical theory?
3. Discuss the Keynesian theory of liquidity preference as an explanation of the determination of the interest rate.
4. Compare and contrast the classical and Keynesian theories of rate of interest.
5. Discuss the relationship between interest rate and the price level according to the classical and Keynesian theory of interest.
6. Define the term 'structure interest rates' and explain about the determinants of term-structure interest rates.
7. Discuss the different theories that explain the relationship between the yield period to maturity.
8. What determines the general structure of interest rates?

Interest Rates in India

24 CHAPTER

Learning Objectives

- **LO 1** Recognise the interest rate system and the system of administered interest rate system in India
- **LO 2** Know more about deregulation of interest rates
- **LO 3** Identify the features of current interest rates system and the interest rate trends in India
- **LO 4** Explain real interest rates and the implications of deregulation
- **LO 5** Discuss the relationship between interest rates and other macroeconomic variables in India
- **LO 6** Understand the determinants of savings and investments and the issue of relative rates of return

24.1 INTRODUCTION

Interest rate is the price of the instruments available in the financial market. The changes in the interest rates have the implication on various indicators in the financial markets. Interest rate is the major channel for monetary transmission mechanism. Money supply in the market is controlled by changing the interest rate. The change in the interest rate also affects the bank credit which ultimately affects the investment in the economy and output. It also determines the stock prices in the stock market. The value of the stock is determined by discounting the future cash flows of the company, and the discount rate depends upon the market interest rate. The change in the market interest rates also affects the bond prices. In a macroeconomic framework, the central bank determines the policy rate that affects the target, short-term market interest rates, and finally the long-term and bank lending rate get affected. After the discussion of different theoretical approaches to the determination of interest rates in the previous chapter, we are in a position to study the actual level and structure of interest rates and interest rates policy in India. We will discuss the major features of, and trends in interest rates behaviour during 1951–2016, international dimensions of interest rates and the debate on interest rates policy in India in this chapter.

24.2 INTEREST RATE SYSTEM IN INDIA

LO 1

Recognise the interest rate system and the system of administered interest rate system in India

The period since 1951 can be divided into five different phases of interest policy or system in India.

Phase-I: 1951–1952 to 1960–1961: Flexible interest rates system.

Phase-II: 1961–1962 to 1985–1986: The system of administered, regulated and repressed or suppressed (low) interest rates.

Phase-III: 1986–1987 to 1990–1991: The beginning of liberalisation or the system with inclination or intent towards liberalisation and flexibility, or a semi-administered system with the inching up of interest rates.

Phase-IV: 1991–1992 to 1996–1997: The system of progressive deregulation and flexibility, and a significant increase in and unprecedentedly high interest rates, or the phase of deregulation and dear money.

Phase-V: 1997–1998 to 2015–2016: The system of managed flexibility with nearly complete deregulation, and one of the lowest levels of interest rates in India, or the phase of deregulation and cheap money.

24.3 SYSTEM OF ADMINISTERED INTEREST RATE REGIME

Considering all these phases, it is evident that from 1961–1985, the central fact about interest rates in India was that they were far from being determined by market forces. They were determined by the monetary authorities; and the breadth and depth of intervention by the authorities had increased over time. The features of administered interest rate system are as follows:

(a) The deposit and lending rates of commercial and co-operative banks were fixed by the authorities. Deposit rates first came to be regulated in 1966 through inter-bank agreements. Since 1969 they were fixed by the RBI. It had also been fixing the maximum and minimum lending rates of commercial banks since 1964 and 1969, respectively. The RBI fixed different deposit rates and lending rates for different types of banks, *viz*. large banks, smaller banks, co-operative banks and regional rural banks. (b) The Controller of Capital Issues fixed the ceiling on the coupon rates on industrial debentures and preference shares. (c) The Indian Banks Association had been fixing the ceiling on call rates since 1973 until October 1988 when the call rate was freed from the ceiling. (d) The government fixed the rates on treasury bills and long-term government securities. (e) The government had a great say in the fixation of interest rates on long-term loans of term financing institutions. (f) The RBI fixed different interest rates on loans to different categories of borrowers and on loans for different purposes. (g) It fixed interest rates on different financial instruments such as commercial bills. (h) Co-operative societies were required to accept deposits at higher rates and to lend at lower rates than the rates of commercial banks.

24.3.1 Reasons for Regulation

Why had the authorities imposed controls on interest rates? The fear that otherwise they would be much higher than 'desirable' and may fluctuate widely and destabilise the financial system had been the basic underlying factor in this context. In other words, the direct regulation of interest rates was mostly undertaken with a view to maintain them at a low level which, in turn, was regarded necessary for certain purposes. In

many developing countries including India, low interest rates had been regarded desirable in order to induce a higher rate of fixed capital formation. The belief in the theories of economic development which gives paramount importance to the high rate of capital formation as the most critical development factor had shaped such a policy. The government's need for funds had been another major consideration. In a planned economy, the government and the public sector have huge financial requirements. It was thought that if the interest rates are kept low and stable through direct controls, the cost of public debt is kept low, and the stability is maintained in the government securities market which is conducive for debt placement and management.

It was also argued that in a planned economy, the priorities and objectives of development are determined by the authorities. If the course of development is to be in keeping with these priorities, the provision of credit with certainty and at low cost in the desired directions becomes necessary. A related argument was that money and capital markets in India are characterised by a variety of imperfections. As a result, certain types of borrowers are discriminated against with regard to the availability, cost and other terms of finance. The discretionary control of cost and availability of finance were regarded necessary to remove such discriminations against the disability of certain borrowers. In a wider sense, such a policy was said to help in improving the distribution of income in favour of low-income and disadvantaged groups of society. The following reasons also have been mentioned for controlling, in particular, deposit and lending rates of banks: (a) To avoid unhealthy competition for borrowing and deposit accounts; (b) To maintain a kind of uniformity of interest rates on these accounts of all types of banks; (c) To keep deposit rates in alignment with the lending rates of banks and with other market rates of interest; (d) To aid deposit mobilisation; (e) To lengthen the maturity structure of deposits; (f) To enable the authorities to avoid frequent changes in the bank rate, and yet to achieve the results of changes in the bank rate. Finally, it had been argued that when interest rates are free, changes in traditional techniques of monetary control might not bring about material changes in the entire interest rates structure, or policy changes may be accompanied by undesirable movements in the market rates. In other words, it was felt that the effectiveness and predictability of monetary measures are limited when interest rates are free. On the other hand, if the market rates are changed directly, the effect of the policy on economic activity would be greater and certain. In short, the administered system of interest rates allegedly enhances the predictability and efficacy of the monetary policy.

24.3.2 Effects of Regulation

All the interest rates are not alienated with each other. It may be noted that the increase in interest rates in India during 1961–1985 were the result of periodic 'mark-ups', but we do not know how the authorities have determined the extent, frequency, timing and so on of these 'mark-ups'. We do not have any enunciation from the authorities about the principles or considerations and the weightage given to them, which underlie their 'mark-up' decisions. It appears that decisions in this respect were mostly being taken in an *ad hoc* manner. Consequently, the levels of interest rates, differences in different rates and changes in both of these had usually not been related to the considerations of risk, liquidity, maturity and demand for and supply of funds. The concept of adjacency of different financial assets, in the sense of well-defined differentials in interest rates on them when they are arranged in the descending or ascending order on the basis of their major attributes, does not appear to have had much meaning in India. Another consequence of the administered system of interest rates had been made to sacrifice the simplicity in the working of interest rate mechanism. The authorities had to administratively fix an unbelievably large number and vast range of interest rates from time to time. The interest rates structure had assumed an exceedingly complex and unmanageable

character. Finally, the administered system had been progenitive of a complex system of direct credit controls as a means of monetary policy and allocation of available finance among different borrowers, sectors and uses. The controls on the price of finance had begotten controls on the quantity of finance which, in turn, had resulted in the further atrophy of those techniques of monetary control which are appropriate for and consistent with the competitive, efficient and dynamic financial organisation. The monetary system had thus been caught in a vicious circle. In short, the major deficiencies of the system of administered interest rates as given by Chakravarty Committee[1] were:

- This system had grown to be unduly complex, and it contained features that had reduced the ability of the monetary system to promote the effective use of credit.
- The low yields on treasury bills and government securities had resulted in the high level of monetisation of public debt and consequent monetary expansion.
- The captive market for government securities had adversely affected the growth of capital market and the profitability of banks.
- Concessional rates of interest had allowed projects of doubtful viability to be undertaken.
- Quantitative credit controls had come under severe stress in the absence of support from any price rationing mechanism.
- The system had lacked the flexibility necessary for augmenting the pool of financial savings.

24.4 DEREGULATION OF INTEREST RATES

LO 2

Know more about deregulation of interest rates

There was a case for replacing the system of administered rates by the system of free, flexible, and higher interest rates in India because of the above-mentioned factors. As we have shown elsewhere, the latter would be far more conducive for promotion of saving, efficiency of financial system, efficiency of investment, efficiency of monetary policy and efficiency and equity in government finances, without sacrificing the cause of priority sectors and social justice.[2] The Chakravarty Committee also had strongly recommended that the administered system should be modified in such a manner that the deficiencies so far referred to are eliminated substantially, if not fully. It, of course, did not visualise that the present system can and should be completely abandoned. It had however, recommended that the ceiling on interest rates on bank loans and call loans should be abandoned; and that the interest rates on treasury bills, government securities, bank deposits and so on should be appropriately raised so as to yield realistic and reasonable real rates of return to the holders of these claims. It also had made a very important point that the higher interest rates are not really against the goal or social justice and that they, in fact, help small savers who are not in a position to take advantage of fiscal concessions. The various recommendations of the committee were directed at ending an era of the weak, passive, ineffective, complicated, and economically and socially harmful interest rates policy in India.[3] The process of interest rates liberalisation began in the middle of 1980s.

[1]RBI, Report of the Committee to Review the Working of the Monetary System, Bombay, 1985, p. 173.
[2]For a detailed theoretical and empirical discussion of these points, see Bhole, L.M., 'Administered Interest Rates in India', *op. cit.*, pp. 1096–1103.
[3]RBI, *ibid.*, pp. 174–183.

Accordingly, the following important changes in the direction of deregulating the entire interest rates structure have been made: (a) Bank rate has been activated. (b) Most of the money market rates have been deregulated. (c) The ceiling on the call rate was withdrawn with effect from May 1, 1989. (d) The interest rates on treasury bills, certificates of deposits, commercial paper and inter-bank participations are allowed to be flexible, variable and market determined. (e) The deposit and lending rates of commercial banks, RRBs, urban co-operative banks and other co-operative banks have been freed. (f) Interest rates on public deposits accepted by all non-banking companies (financial and non-financial) have been deregulated. (g) The coupon rates on government dated securities have been made market-related. (h) The interest rates on convertible, non-convertible and other types of debentures have been made free. (i) The term lending institutions can now charge interest rates unhindered by the state intervention.

Of course, freeing, deregulation and flexibility of interest rates has differed from instrument to instrument such as bank credit, bank deposits, government securities, small savings and so on. The policy has been one of the size-wise and term-to-maturity-wise differences in flexibility. For example, while the long-term deposit rates continued to be administered till April 1992, the banks were allowed to set interest rates on deposits with maturities between 15 days and 1 year subject to a ceiling of eight percent from April 1985. However, this freedom was withdrawn from end-May 1985; the experiment proved to be short-lived because it resulted in a deposit rates war among the banks, the fear of which had been one of the reasons for adopting the system of administered interest rates. Thus, bank deposits interest rates continued to be administered for some more time, and the deregulation policy really began with the liberalisation of banks' lending rates. In September 1991, the size-specific, usage-specific, borrower-specific, sector-specific and programme-specific lending rates prescriptions, except for the areas like agriculture, small industries and differential interest rates scheme (DIRS) were discontinued, and interest rates on loans above ₹ two lakh were freed subject to a minimum lending rate prescribed by the Reserve Bank of India (RBI). The efforts were made to reduce significantly the multiplicity of lending rates and the complexity of interest rates structure by reducing lending categories from about 50 to about 5. The minimum lending rate prescription just mentioned was also discontinued from October 1994, and banks were given full freedom to determine their all lending rates on loans above ₹ two lakh, but they were required to announce their prime lending rates (PLRs). This policy continued for two years till October 1996 when banks were advised to announce the maximum spread of their lending rates over the PLR. Subsequently, each bank was permitted to operate the system of its own separate three different PLRs: general, short-term and long-term. Now, the banks and RBI are in the process of merging these bank-specific three PLRs and evolve a single PLR for the banking industry as a whole.

As described above, except for a very short interregnum of 2 months in April-May 1985 in the case of short-term deposit rates, interest rates on bank deposits continued to be administered till April 1992 when the process of their deregulation was started. In the beginning, the then existing maturity-wise prescriptions for interest rates on deposits were replaced by a single ceiling rate, which was subsequently varied in line with changes in the minimum lending rate. In April 1992, a single ceiling rate of 13 percent was fixed for all deposits above 46 days maturity. This ceiling rate was reduced to 10 percent in November 1994, and it was again raised to 12 percent in April 1995. In October 1995, bank deposits with maturity of over 2 years were exempted from the prescription of the ceiling interest rate. In July 1996, deposits with maturity over 1 year were exempted from the ceiling rate. In April 1997, the ceiling rate for deposits of 30 days to 1 year was fixed at the level of bank rate less than 200 basis points. In October 1997, deposit rates were fully deregulated by removing their linkage with the bank rate.

Consequently, many interest rates have now become market-determined, market-related and flexible. However, there are still certain important interest rates in the Indian economy which continue to be administered. Interest rates on small savings (SS), provident fund (PF) and non-resident Indians (NRI) deposits are controlled even today. Similarly, interest rates on savings accounts with the commercial and co-operative banks also continue to be prescribed by the RBI. Further, the priority sector lending rates are also capped at PLR plus 4 percent. Then, the RBI may soon benchmark banks' PLR to their cost of funds. As in the case of exchange rate, the monetary authorities intervene from time to time to guide interest rates movements in the country. As a part of deregulation, the RBI has introduced the following measures to impart greater flexibility to the level and structure of interest rates in the country: (a) To encourage banks to introduce a flexible interest rates option for deposits; (b) To urge banks to review and announce the maximum spread over their PLR; and (c) To ask banks to provide information on deposit rates for various maturities, the effective annualised return to depositors and the maximum and minimum interest rates charged to their borrowers.

24.5 FEATURES OF CURRENT INTEREST RATES SYSTEM IN INDIA

LO 3

Identify the features of current interest rates system and the interest rate trends in India

In the current period, the interest rates prevailing in India can be broadly divided into various categories. Some interest rates that are determined by the RBI are referred as policy rates. These rates are repo rate, reverse repo rate, marginal standing facility rate and bank rate. The other rates are marker determined. Some of the major market determined interest rates are call money rate, treasury bills rate, yield on government dated securities and stock market return. Some of the rates are determined by the commercial banks considering the policy rates and other short-term and long-term market interest rates. The interest rates set by the commercial banks are savings deposit rate, term deposit rates, and base rate for lending. The base rate was previously fixed by RBI, since July 2010 the base rate of each bank has been fixed by the respective banks.

The RBI has brought new methodology of setting the lending rates by the commercial banks under the name marginal cost of funds based lending rate (MCLR). Marginal cost of funds based lending rate (MCLR) is the new benchmark lending rate at which banks will now lend to new borrowers. Till March 31, 2016, banks used the base rate as the benchmark rate to lend. The interest rate given by a bank for deposits and the repo rate (for obtaining funds from the RBI) are the decisive factors in the calculation of MCLR. Marginal cost of funds based lending rate is built on four components—marginal cost of funds, negative carry on account of cash reserve ratio (CRR), operating costs, and tenor premium. The *marginal cost of funds* will comprise of marginal cost of borrowings and return on net worth. According to the RBI, the marginal cost should be charged on the basis of following factors: (i) Interest rate given for various types of deposits¾savings, current, term deposit, foreign currency deposit, (ii) Borrowings¾short-term interest rate or the repo rate, long-term rupee borrowing rate and so on, and (iii) Return on net worth¾in accordance with capital adequacy norms. The *operating cost* includes cost of providing the loan product including cost of raising funds. *Tenor premium* arises from loan commitments with longer tenors.[4] The marginal cost of borrowings shall have a weightage of 92 percent of marginal cost of funds while return on net worth will have the balance weightage of 8 percent. The Reserve Bank of India (RBI) has asked banks to set at least five MCLR rates—overnight, one-month, three-month,

[4]http://www.livemint.com/Money/3CwLeEqXRgJS2sATs6f6SK/How-MCLR-will-affect-your-home-loan.html

six-month and one-year. Besides these, banks are free to set rates for longer durations as well. The rates have to be reviewed on a monthly basis, but banks that do not have the capacity to do monthly reviews can do so quarterly till March 2017. MCLR-linked loans will be reset for a maximum of 1 year. So, you will have a new interest rate on your home loan at a pre-decided time and for a maximum period of 1 year.

According to the RBI guidelines, 'Banks will review and publish their MCLR of different maturities every month on a pre-announced date'. Such a monthly revision will compel the banks to consider the change in repo rate change if any made by the RBI during the same month. The initial guidelines from the RBI indicate that the base rate will be replaced by the MCLR. Existing borrowers will also have the option to move to the marginal cost of funds based lending rate (MCLR) linked loan at mutually acceptable terms. Banks are also allowed to determine a spread that is higher than MCLR. Depending on your credit profile, banks will decide this. 'The spread will be decided based on credit risk and tenor. For credit risk, in case of an individual borrower, we will look at Cibil rating. Depending on the credit worthiness of the customer, we will set the spread above MCLR. Loans covered by government schemes where banks have to charge interest rates as per the scheme are exempted from being linked to MCLR as the benchmark for determining interest rate. As the MCLR is linked to repo rate and it can be revised every month, then it has better implication on the monetary policy. For example, if the repo rate is reduced by RBI then there is a possibility that MCLR rate also will reduce by that month which will affect the bank credit and money supply in the short run. The trends and features of all these rates are discussed in the following section.

24.6 TRENDS IN INTEREST RATES IN INDIA

Table 24.1 shows the annual averages of major interest rates prevailing in India during the period 1952–2016. Broadly, these rates are divided into five categories such as policy rates (repo rate, reverse repo rate, marginal standing facility rate, and bank rate), cash reserve ratio, market determined interest rates (call money rate, treasury bill rate, government bond yield), bank lending rate, savings rates, and other rates like return from the stock market indexes, interest rates on provident funds and national savings certificates.

Table 24.1 Nominal Interest Rates in India, 1952–1953 to 2015–2016, Annual Averages

Year	*RR*	*Rv.RR*	*MSF*	*BR*	*CRR*	*CMR*	*TBR*	*GBY*	*LR*
1952–1970	—	—	—	**4.2**	—	**4.59**	**2.74**	**4.23**	**4.95**
1971–1990	—	—	—	8.8	7.21	8.67	4.33	6.56	13.2
1990–2000	—	—	—	**10.6**	**12.36**	**11.21**	**7.32**	**11.93**	**15.5**
2001–2005	8.75	6.625	—	6.25	9.03	5.85	5.59	7.42	11.5
2005–2006	7.86	5.96	—	6	6.91	5.6	5.51	7.46	11.5
2006–2007	7.5	5.75	—	6	5.62	7.22	6.8	8.73	13.5
2007–2008	8	6.99	—	6	7	6.07	6.86	7.88	14.0
2008–2009	6.97	4.93	—	6	7.27	7.26	6.88	7.58	14.15
2009–2010	**5.62**	**4.33**	—	**6**	**5.75**	**3.29**	**3.4**	**7.32**	**13.37**
2010–2011	7.53	6.53	8.9	6	5.75	5.89	6.2	7.91	8.87
2011–2012	8	7	9	7.75	4.75	8.22	8.43	8.44	10.37

(*Contd.*)

2012–2013	7.55	6.55	8.55	8.75	4	8.09	8.14	8.21	10.00
2013–2014	8	7	9	9.12	4	8.28	8.85	8.45	10.12
2014–2015	7.31	6.31	8.31	8.62	4	7.97	8.34	8.29	10.12
2015–2016	6.37	5.87	6.87	8	4	6.58	7.27	7.78	9.50
	SDR	**1-3 TD**	**3-5 TD**	**> 5 TD**	**NIFTY**	**SENSEX**	**EPF**	**NSC**	
1952–1970	—	**6.5**	**7**	**7.85**	—	—	—	—	
1971–1990	—	8.25	9.35	10.56	—	22.23	8.27	10.5	
1990–1900	—	**10.97**	**11.78**	**11.95**	**17.56**	**19.86**	**12**	**12**	
2001–2005	4.00	6.85	7.3	7.51	13	14.28	9.5	9.75	
2005–2006	3.50	6.5	7	7	11.22	11.41	8	8.5	
2006–2007	3.50	9	9	9	67.17	73.73	8.5	8.5	
2007–2008	3.50	8.75	8.75	9	12.31	15.88	—	—	
2008-2009	3.50	8.75	8.5	8.5	23.88	19.67	8.5	—	
2009–2010	**3.50**	**7**	**7.5**	**7.75**	**–36.19**	**–37.93**	**8.5**	—	
2010–2011	3.50	9	8.75	8.75	73.75	80.53	9.5	8	
2011–2012	3.96	9.25	9.25	9.25	11.14	10.93	8.25	8.4	
2012–2013	4.00	9	9	9	–9.22	–10.49	8.5	8.6	
2013–2014	4.00	9.25	9.1	9.1	7.30	8.227	8.75	8.5	
2014–2015	4.00	8.75	8.75	8.5	17.96	18.84	8.75	8.5	
2015–2016	4.00	7.5	7.5	7.3	26.65	24.88	8.8	8.5	

Notes: RR = Repo Rate; Rv. RR = Reverse Repo Rate; MSF = Marginal Standing Facility Rate; BR = Bank Rate; CRR = Cash Reserve Ratio; CMR = Call Money Rate; TBR = 91 days Treasury Bill Rate; GBY = 10 Years Government Bond Yield; LR = Lending Rate, SDR = Savings Deposit Rate, 1-3TD = 1 to 3 year Term Deposit Rate; 3-5TD = 3–5year Term Deposit Rate; >5TD = Term Deposit above 5 Years Maturity, NIFTY: Index Return from Nifty Fifty; SENSEX: Index Return from BSE Sensex; EPF = Employee Provident Fund Rate, and NSC = Interest Rate in National Savings Certificate. Data on deposit and lending rates relate to five major Public Sector Banks up to 2003–2004. For subsequent years, the data relate to five major banks.

Source: RBI, Hand Book of Statistics, Various Issues.

In the current period, RBI's monetary policy has mostly focussed on the short-term liquidity management. Up to 2009–2010, the central bank was using both repo and reverse repo as the major policy interest rates; bank rate was almost stagnant at 6 percent. Since 2010–2011, RBI has been using repo rate as the only policy rate and the reverse repo rate and marginal standing facility rate are linked to the repo rate only. The trend shows that the repo rate has varied between 7.3 percent and 8 percent during 2010–2011 to 2014–2015, in the year 2015–2016 it has come down to 6.37 percent. It could be due to less liquidity in the market in the previous year. It is also evident from the table that bank rate became very active during 2010–2011 to 2015–2016 and it has increased from 6 percent in the year 2009–2010 to 9.12 percent in the year 2013–2014 and further it has again declined to 8 percent in the year 2015–2016. The cash reserve ratio (CRR) has gone down from 12.36 percent in the year 1999–2000 to 4 percent in the year 2015–2016. In accordance with these policy rates, the call money rate was only 3.29 percent in the year 2009–2010, which has further increased to 8.28 percent in the year 2013–2014. Further, it has shown a declining trend during the period 2014–2016. The change in the 91-days treasury bill rate has followed the same path as the call money rate (CMR). The 10

years government bond yield also has not shown any particular trend in the said period. The saving deposit rate has increased from 3.5 percent in the year 2005–2006 to 4 percent in 2012–2013, and it is stagnant after that. In the early period, the interest rates on short-term deposits were lower than long-term deposits. But later, the term deposits have provided more or less same interest across the term to maturity. The stock index returns are highly volatile, but in most of the years, both the indexes have given more returns than other interest rates available in the market. The EPF interest rate, which generally fixed by the government has varied between 8.5 percent and 9.5 percent during 2008–2009 to 2015–2016. The maximum return gained from NSC was 8.6 percent in the year 2013–2014.

Based on all this information we have highlighted the major behavioural and policy-relevant features of interest rates in India,[5] which are as follows:

24.6.1 Temporal Changes

The extent of changes in interest rates differs across the interest rates and in different periods. During 1952–1970, the rates were less, during the period 1971–2000, all the rates have increased, these rates have relatively declined during 2001–2010, again an increasing trend has been observed during 2010–2011 to 2014–15, but a declining trend has been observed in the year 2015–16. The variability or the amplitude of fluctuations has been different in the case of different interest rates. The standard deviation and the variance have been quite small in the cases of treasury bill rate, the government bond yield, term deposit rates across the maturity, national savings certificate, EPF rates and so on, but they have been very high in the case of stock returns, call rate, and lending rate in the ascending order. The repo rate, bank rate and MSF rate have had the middle-order degree of fluctuations (Table 24.1).

Among different rates of interest, those on government claims like treasury bills and government bonds have been quite stable; they have increased much less in comparison with other rates of interest until recently, the policy of the monetary authorities to keep the cost of government financing low and to maintain a stable market for government securities by undertaking appropriate support operations had resulted in stabilising yields on them. Government had to provide concessional finance to financial institutions and public sector enterprises. Therefore, the government had to keep the cost of borrowing low, not only because their own need for finance was large but also because they had to provide concessional finance to others. It is, however, true that during 1980–1990s, the cost of government finance has much increased compared to the earlier period. As explained in Chapters 17 and 22, interest rates on TBs and government bonds have been brought in alignment with market rates of interest during 1990s and further.

One of the areas in which conventional analysis of interest rate differentials does not apply in India is with regard to differences in the interest rates on bank deposits, and government securities on the one hand, and on small savings media on the other (See Tables 24.1). All these financial assets offer the same degree of safety and liquidity. They are also more or less comparable in respect of tax advantages. Yet, interest rates on small savings have been either higher or lower than the interest rates on government securities and bank deposits. For example, the interest rates on post office savings certificates have been higher than the rates

[5]See also Bhole, L M, 'Administered Interest Rates in India', *Economic and Political Weekly*, June 22–29, 1985; 'The Structure of Interest Rates In Theory And Practice', *The Indian Journal of Economics*, October 1988; 'Some Issues Concerning Interest Rates Theory and Policy', *The Indian Economic Association*, Conference Volume, December 1988; 'Determinants of Interest Rates In A Deregulated Economy', *The Indian Journal of Economics*, October 1996; 'Determinants of Long-term Interest Rates in India During 1970s–1990s', *Prajnan*, Vol. XXXII, No. 2, 2003–2004 (with P. Dash)

on government securities of comparable maturities. They are also higher than interest rates on time deposits with banks. Similarly, the rate of interest on post office savings bank deposits has often been higher than the rate on savings bank accounts with commercial banks. The interest rates on post office time deposits were also higher than those on time deposits with commercial banks. Thus, the interest rate differentials are explained neither by maturity, nor by risk, liquidity and tax benefits. When the interest rates on bank deposits, government securities, and small savings are all administered; the explanation of the phenomenon of relatively higher interest rates on small savings has to be sought in the fact that the government deliberately decided to offer relatively more attractive rates on these assets in order to channelise household savings to the exchequer. A more liberal explanation of the government policy would be that an increase in the resources with banks, and an increase in the stock of government securities (when they are held by the banks) will increase the capacity of the banking system to expand credit which undermines the objective of stability. It may be assumed that the government has been intending to minimise such a threat to stability. Similarly, in the era of deregulation, interest rates on bank deposits have received a kind of step-motherly treatment or bank depositors have received a raw deal. These rates were the last to be really and fully deregulated; for a long time, deregulation took place more in respect of bank lending rates than deposit rates. Even after deregulation, they have not increased because of some kind of understanding or agreement among the banks. As pointed out earlier also, two types of reforms are needed in respect of interest rates on bank deposits in the interests of social justice towards small, medium, rural, dispersed savers and of effectiveness of monetary policy: these rates need to be raised, and they need to be structured in such a way that they increase along with the increase in the maturity of deposits.

24.6.2 Relationship between Short-Term and Long-Term Interest Rates

An important aspect of interest rates structure which needs to be examined here is the difference between the short-term rates and long-term rates. The evidences on the term-structure of interest rates during the period 1952–2016 are presented in the Table 24.1 showing that the call money rate, 91 days treasury bill rates have been always lower than the long-term government bond yield. Normally, the yield on short-term government securities has been lower than the yield on medium-term securities; the latter, in turn, has been lower than the yield on long-term securities. Similarly, the rate of interest on bank deposits of one-year maturity has been lower than that of three-year deposits. The same has been true in the case of interest rates on public deposits with companies. This also means that yield-to-maturity curves in India have been upward sloping. However, there have been diverse tendencies in the behaviour of different yield curves. While the yield curve of government securities has tended to flatten out (i.e. the maturity differential has diminished), that the bank deposits have tended to rise upward more steeply. The geometric mean of the long-term rates is higher than the geometric mean of the short-term rates.[6]

There is no doubt that over a period of time, the spread between long-term and short-term rates has declined. There is no single explanation for this phenomenon in respect of all rates; different forces have been working in different segments of the market for funds. As far as the yields on government securities are concerned, the demand for long-term securities has increased. Because of the ready and continuous support to the market by the authorities, portfolio managers of institutions have recognised that long-term securities are as liquid as short-term securities. Further, there was an increase in the resources of investors like LIC, provident funds

[6]Brahmanandan, P R, 'Thought on Interest Rates under Indian Conditions', in RBI, *Recent Development in Monetary Theory and Policy*, Bombay, 1978, p. 157.

and so on, the buyers of predominantly long-term securities. It has been shown earlier that the proportion of long-term securities in the volume of all government securities has increased in the 1970's. Faced with a ready market for long-term securities, the authorities have tried to issue these securities at relatively low coupon rates in order to minimise the cost of public debt. The difference between the coupon rates on short- and long-term securities has tended to decline.

In the organised private sector, the long-term rates have risen at a slower rate for the following reasons. First, fixed asset formation has been regarded as desirable for the economy; therefore, the cost of long-term investment has been kept low. For the same reason the long-term rates of co-operative credit societies have been fixed at a lower level than their short-term and medium-term rates. Second, the setting up of a number of term-lending institutions has meant that the supply of long-term funds has increased in the economy. These institutions have been able to offer long-term finance at lower rates, then what would have been possible if they had to raise their resources in the open market and if profitability had been a pre-dominant consideration in their functioning. They obtained concessional finance from the government and RBI for their operations. In the case of institutions like LIC, because of their monopolistic position, there has been no competitive compulsion on them to offer better rates of return to mobilise resources. The growth of institutions with vast resources also means that the supply of funds ceases to be influenced by the expectations about future prices and interest rates. These institutions tend to continue to supply funds irrespective of these considerations and consequently interest rates do not rise as they would have if the supply of fund was affected.

Short-term interest rates, on the other hand, had to be stepped up because it was found that short-term finance was being used for holding excessive inventories which, among other factors, caused inflationary pressures. The link between the expansion in bank credit and increase in inventory holdings has been well-established in India. The expansion in bank credit increases money supply in the economy and thereby accentuates price increases. The increase in short-rates has thus been regarded as an instrument to fight inflation in the country. The fixation of short-term rates on bank loans at a higher level than the rates on their term loans since 1975 is a recent manifestation of this approach to financial policy. The minimum lending rate under selective credit controls has been higher than other bank lending rates which also substantiate the reasoning adopted here. A similar argument explains the opposite behaviour of short- and long-term rates on bank deposits that is widening of the gap between the two types of rates. An increase in the short-term deposits of banks means an increase in money supply and liquidity in the economy. Conversely, an increase in long-term deposits implies an increase in savings. Therefore, the authorities have attempted to increase the proportion of fixed deposits by offering relatively more attractive rates of return on them.

24.6.3 Analysis on the Monetary Policy Corridor

An interest rate corridor or a policy corridor refers to the range within which the operating target of the monetary policy¾a short-term interest rate, say the weighted average call money market rate, moves around the policy rate announced by the central bank. As discussed in Chapter 6, the upper bound of the interest rate corridor in India is served by the marginal standing facility (MSF) rate which is the penal rate at which banks borrow money from the central bank and lower bound is served by the reverse repo rate, the rate at which banks park their surplus with RBI by purchasing the securities from the central bank. The typical corridor used by the RBI had been 200 basis points (100 basis point (bps) = 1 percent) or +/– 100 bps around the policy rate. In April 2016, the RBI narrowed the policy rate corridor from +/– 100 basis points (bps) to +/– 50

bps. Thus, MSF will be fixed 50 basis points above repo rate and reverse repo would be fixed 50 basis points below repo rate. This was done with a view to ensure finer alignment of the weighted average call rate or the overnight money market rates with the repo rate (which essentially means more effective transmission of monetary policy). According to the monetary policy corridor, the call money rate should typically hover around the policy rates that is at the time of excess liquidity in the system, the rates are around the reverse repo rate while at the time of shortage, the same hovers around the repo rate. At extremely tight liquidity conditions, these rates hung near to the MSF rate. From Table 24.1, we find that the call money rate is always below the MSF rate and it is hovering around the repo and reverse repo throughout the period that is 2010–2011 to 2015–2016. This implies that the monetary policy corridor is maintained in the context of India.

24.6.4 Interest rates for Non-Resident Deposits[7]

For savings deposits with effect from December 16, 2011, the interest rates are deregulated. However, interest rates offered by banks on NRE deposits cannot be higher than those offered by them on comparable domestic rupee deposits. Since interest rate of domestic savings deposits was deregulated with effect from October 25, 2011, the interest rate on NRE savings deposits for the period October 25 to December 15, 2011 was 4 percent per annum. In the case of term deposits with effect from the close of business in India on December 16, 2011, interest rates on non-resident (external) rupee (NRE) deposits are deregulated. Accordingly, banks are free to determine their interest rates on both, term deposits of maturity of 1 year and above under non-resident (external) rupee (NRE) deposit accounts. From the close of business in India on November 23 to December 15, 2011, interest rates on NRE deposits for 1–3 years should not exceed the LIBOR/SWAP rates plus 275 basis points, as on the last working day of the previous month, for US dollar of corresponding maturities (as against LIBOR/SWAP rates plus 175 basis points effective from close of business on November 15, 2008). Consequent upon the deregulation of interest rates on NRE deposits with effect from December 16, 2011, banks are free to determine interest rates on NRE deposits of different maturity, including deposits of more than 3 years subject to such rates not being higher than those offered on domestic deposits of comparable maturity. For the purposes of operational convenience, the interest rates should be rounded off to the nearest two decimal points. For example, a computed interest rate of 3.676 percent would become 3.68 percent, and 3.644 percent would become 3.64 percent.

24.6.5 Concessional Interest Rates

Although the general level of interest rates had gone up, the cost of funds for some borrowers had been lower than what is indicated by the general level of interest rates. The interest rates structure as it has emerged in India over the period is much more complex than in other countries. Behind the general level of interest rates, there are a number of interest rates in each category of loans. The spread between these rates cannot be explained by conventional factors such as risk, marketability and the like. These interest differentials have arisen because of the policy of 'differential interest rates' adopted by the authorities with a view to achieving certain social objectives. The loans for financing small industries, exports, agriculture, small borrowers, backward areas, food procurement and so on have been usually provided at lower interest rates. This policy is required to be followed by the entire spectrum of financial institutions in the economy.

[7]ttps://www.rbi.org.in/scripts/BS_ViewMasCirculardetails.aspx?Id=8137&Mode=0.

24.7 INTERNATIONAL COMPARISON

How interest rates in India are compared with those prevailing elsewhere in the world? What is the extent to which interest rates in India and abroad are correlated and how the interest rate differential between India and (selected) other countries has behaved? We have studied this problem in detail elsewhere also.[8] The main conclusions from that study of changes in the level of interest rates, and changes in interest rate differentials in India *vis-a-vis* the US, the UK, West Germany and Japan over the period of 1971–2002 as reflected in Tables 24.2 and 24.3 which are given below by the way of illustration:

(i) The short-term rate of interest in India has usually been higher than the similar rate in other countries, especially West Germany and Japan. There does not exist a clear increasing or decreasing trend in the differential between the Indian and world short-term rates.

(ii) The long-term rate of interest in India was mostly lower than the similar rate in other countries till 1985. Thereafter, the long-term rate in India has been mostly higher than in other countries.

(iii) Thus, while both the short-term and long-term interest rates in abroad have somewhat eased, they have somewhat hardened in India since 1990.

(iv) Both the short-term and long-term interest rates abroad have fluctuated more than those in India. The flexibility and variability (volatility) of all interest rates in other countries have been far greater than in India. The short-term rate of interest has been more volatile than the long-term rate in all the countries including India.

Table 24.2 Short-Term Interest Rates in India and a Few Other Countries during 1970–1971 to 2015–2016

Year	*India*	*Australia*	*Canada*	*Japan*	*UK*	*USA*
1971	6.30	7.008	4.56	4.72	3.45	5.005
1980	7.24	12.02	13.12	10.88	5.77	13.06
1985	10.00	15.98	9.59	6.62	4.92	8.04
1990	15.57	14.54	13.01	7.71	8.91	8.14
1995	15.57	7.72	7.12	1.23	2.94	5.91
2000	9.26	6.17	5.69	0.24	3.17	6.45
2001	7.65	4.89	3.99	0.12	2.86	3.68
2002	6.15	4.74	2.62	0.06	1.12	1.72
2003	5.81	4.89	2.96	0.04	0.32	1.15
2004	4.63	5.47	2.31	0.03	0.48	1.56
2005	4.99	5.64	2.81	0.03	0.81	3.51
2006	5.51	5.98	4.17	0.24	1.55	5.15
2007	7.75	6.66	4.56	0.79	5.95	5.28
2008	7.41	6.97	3.20	0.92	5.49	3.20
2009	4.77	3.43	0.45	0.47	1.19	0.93

(*Contd.*)

[8]Bhole, L M, 'International Aspects of Monetary Policy in India', *International Journal of Development Banking*, January 1991; and Bhole, L M, and Sebastian, V J, 'Determinants of Interest Rates in a Deregulated Open Economy', *The Indian Journal of Economics*, October, 1996.

2010	5.95	4.68	0.79	0.23	0.69	0.52
2011	8.06	4.84	1.19	0.19	0.88	0.41
2012	7.91	3.72	1.193	0.193	0.83	0.42
2013	7.60	2.78	1.196	0.15	0.49	0.33
2014	7.91	2.67	1.21	0.12	0.53	0.27
2015	7.00	2.25	0.84	0.09	0.55	0.46
2016	6.38	2.00	0.81	–0.03	0.51	0.92

Source: OECD Statistics and RBI, Annual Reports, Various Issues.

Table 24.3 Long-Term Interest Rates in India and a Few Other Countries during 1970–71 to 2015–16

Year	*India*	*Australia*	*Canada*	*Japan*	*UK*	*USA*
1971	5.64	6.71	6.94	7.28	7.86	6.15
1980	6.71	11.59	12.33	7.22	13.91	11.46
1985	9.22	13.90	10.91	6.34	10.97	10.62
1990	10.9	13.19	10.72	6.95	11.80	8.55
	12.6	9.21	8.16	3.44	8.20	6.58
2000	11.50	6.31	5.93	1.74	5.32	6.02
2001	11.20	5.61	5.47	1.31	4.93	5.01
2002	9.14	5.84	5.29	1.26	4.89	4.61
2003	7.43	5.36	4.80	1.01	4.52	4.01
2004	6.58	5.59	4.58	1.49	4.88	4.27
2005	6.63	5.33	4.06	1.35	4.41	4.29
2006	7.46	5.58	4.21	1.74	4.50	4.79
2007	7.88	5.99	4.27	1.67	5.01	4.62
2008	7.59	5.81	3.60	1.48	4.59	3.66
2009	7.32	5.04	3.23	1.34	3.64	3.25
2010	7.91	5.36	3.235	1.16	3.62	3.21
2011	8.44	4.88	2.78	1.11	3.13	2.78
2012	8.21	3.37	1.87	0.84	1.91	1.80
2013	8.45	3.69	2.26	0.70	2.39	2.35
2014	8.29	3.65	2.23	0.55	2.56	2.54
2015	7.78	2.71	1.52	0.35	1.90	2.13
2016	7.07	2.19	1.24	–0.05	1.27	1.80

Source: OECD Statistics and RBI, Annual Reports, Various Issues.

24.8 REAL INTEREST RATES

LO 4

Explain real interest rates and the implications of deregulation

Thus, this discussion of interest rates has been related mainly to nominal interest rates. There is a view that these are the real rates of interest which are relevant in investment and saving decisions. The *ex-post* real rates of interest in India, calculated as the nominal rate of interest minus rate of change in the general price level, have greatly fluctuated during the period under study. The study of

annual average real rates for different quinquennial presented in Table 24.4 reveals certain important features of the movements of real interest rates in India. While the nominal rates have shown a definite upward trend, the real rates have fluctuated in a disorderly manner, and they have been either very low or negative in many years. In this context, the following important inferences can be made: (a) the higher the level of nominal rates the greater their capacity to absorb prices increases before they become negative; (b) the relative rates of increase in nominal interest rates and prices determine whether real rates would become negative, decline or increase; (c) if a high level of real rates is desired, the nominal rates should be increased at an accelerated rate in a period of inflation; and (d) it becomes more and more difficult to maintain real rates at positive level as the rate of inflation increases.

Table 24.4 *Ex-Post* **Real Interest Rates in India from 1952–1953 to 2015–2016, Annual Averages**

Year	*RR*	*Rv.RR*	*MSF*	*BR*	*CRR*	*CMR*	*TBR*	*GBY*	*LR*
1952–70	—	—	—	—	—	—	—	—	—
1971–90	—	—	—	–0.22	–1.81	–0.35	–4.69	–2.46	4.03
1990–2000	—	—	—	4.14	5.90	4.75	0.86	5.47	8.64
2001–2005	3.53	1.41	—	1.03	3.81	0.63	0.37	2.20	5.85
2005–2006	3.62	1.72	—	1.76	2.67	1.36	1.27	3.22	7.26
2006–2007	0.78	–0.97	—	0.72	–1.10	0.50	0.08	2.01	6.78
2007–2008	0.29	–0.72	—	–1.71	–0.71	–1.64	–0.85	0.17	6.29
2008–2009	5.32	3.28	—	4.35	5.62	5.61	5.23	5.93	12.48
2009–2010	–4.74	–6.03		–4.36	–4.61	–7.07	–6.96	–3.04	3.01
2010–2011	–2.15	–3.15	–0.78	–3.68	–3.93	–3.79	–3.48	–1.77	–0.81
2011–2012	0.30	–0.70	1.30	0.05	–2.95	0.52	0.73	0.74	2.68
2012–2013	1.85	0.85	2.85	3.05	–1.70	2.39	2.44	2.51	4.28
2013–2014	2.00	1.00	3.00	3.12	–2.00	2.28	2.85	2.45	4.12
2014–2015	9.61	8.61	10.61	10.92	6.30	10.27	10.64	10.59	12.42
2015–2016	6.87	6.37	7.37	8.50	4.50	7.48	7.77	8.28	10.00
	SDR	**1-3 TD**	**3-5 TD**	**> 5 TD**	**NIFTY**	**SENSEX**	**PF**	**NSC**	
1952–1970	—	—	—	—	—	—	—	—	
1971–1990	—	–0.77	0.33	1.54		13.21	–0.75	1.48	
1990–2000	—	4.51	5.32	5.49	11.10	13.40	5.54	5.54	
2001–2005	—	1.63	2.08	2.29	7.78	9.06	4.28	4.53	
2005–2006	–1.22	2.26	2.76	2.76	6.98	7.17	3.76	4.26	
2006–2007	–0.74	2.28	2.28	2.28	60.45	67.01	1.78	1.78	
2007–2008	–3.22	1.04	1.04	1.29	4.60	8.17		—	
2008–2009	–4.21	7.10	6.85	6.85	22.24	18.03	6.85	—	
2009–2010	1.85	–3.36	–2.86	–2.61	–46.56	–48.30	–1.86	—	
2010–2011	–6.86	–0.68	–0.93	–0.93	64.07	70.85	–0.18	–1.68	

(*Contd.*)

2011–2012	–6.18	1.55	1.55	1.55	3.44	3.24	0.55	0.70
2012–2013	–3.74	3.30	3.30	3.30	–14.92	–16.20	2.80	2.90
2013–2014	–1.70	3.25	3.10	3.10	1.31	2.23	2.75	2.50
2014–2015	–2.00	11.05	11.05	10.80	20.27	21.15	11.05	10.80
2015–2016	6.30	8.00	8.00	7.80	27.16	25.39	9.30	9.00

Notes: RR = Repo Rate; Rv. RR = Reverse Repo Rate; MSF = Marginal Standing Facility Rate; BR = Bank Rate; CRR = Cash Reserve Ratio; CMR = Call Money Rate; TBR = 91 days Treasury Bill Rate; GBY = 10 Years Government Bond Yield; LR = Lending Rate, SDR = Savings Deposit Rate, 1-3TD = 1 to 3 year Term Deposit Rate; 3-5TD = 3–5year Term Deposit Rate; >5TD = Term Deposit above 5 Years Maturity, NIFTY: Index Return from Nifty Fifty; SENSEX: Index Return from BSE Sensex; EPF = Employee Provident Fund Rate, and NSC = Interest Rate in National Savings Certificate. Data on deposit and lending rates relate to five major Public Sector Banks up to 2003–2004. For subsequent years, the data relate to five major banks.

Source: RBI, Hand Book of Statistics, Various Issues.

24.9 IMPLICATIONS OF DEREGULATION

As a part of this discussion of the trends in interest rates in India, it may be useful to indicate certain implications of deregulation and globalisation for the likely behaviour of interest rates in the near future. First, interest rates are likely to be higher than in the past. It has been the experience in India so far that whenever ceiling on any interest rate (*viz*. call rate, TB rate, bank deposit rate) was removed, the respective rate had tended to increase. The other reasons for the likely higher rates would be discussed in the next section. Second, the economic units would face a higher degree of risk and uncertainty. The cost of funds would no longer be easy to predict. Interest rate risk will be higher on both debt and ownership securities. Naturally, this higher risk could create difficulties for corporate treasurers and FIs. They may be tempted to seek solution in derivatives, but the experience shows that derivatives are not a real or good solution to the risk management.

24.10 INTERACTION BETWEEN INTEREST RATE CHANGES AND OTHER MACROECONOMIC VARIABLES

LO 5

Discuss the relationship between interest rates and other macroeconomic variables in India

The trend analysis shows that the interest rates were low during 1952–1970, but during 1970–2000 there was an increasing trend; further it has been observed that the interest rates have shown a declining trend up to 2009–2010, further we have observed that the interest rates have not followed any particular trend, but all the rates are kept in the lower side in comparison to the previous period. In the recent period, that is during 2007–2008 to 2015–2016, the interest rates have shown the declining trend. The figures presented in the Table 24.5 show that the GDP growth rate, industrial production, savings rate, investment rate, growth of total bank deposits, growth of bank credits, net capital inflows, and growth of money supply have declined. Across the period, it has been observed that the increase in interest rates has taken place along with the increase in prices and money supply and decrease in interest rate has taken place along with the decrease in money supply.

Table 24.5 Annual Average Growth rates of Major Macroeconomic Aggregates

Indicators	**1991–*1992* to 1996–*1997***	**1997–*1998* to *2001–2002***	*2002–2003 to 2006–2007*	*2007–2008 to 2015–2016*
GDP at Factor Cost	5.8	5.5	7.63	7.45
Index of Industrial Production	6.2	5	8.16	6.28
Savings	16.1	11.8	18.55	12.73
Investments	14.9	10.5	19.11	13.32
Exchange Rate	31.1	43.2	45.76	49.83
Total Government Expenditure	11.4	12.6	10.06	13.39
Net Market Borrowings	103.9	40.1	6.95	19.16
Inflation	9.6	4.9	5.02	5.32
Export	24.3	12.3	22.36	13.86
Total Bank Deposits	17.5	16.9	18.85	14.15
Total Bank Credit	15.9	16.2	26.95	14.69
Total Bank Credit to Commercial Sector	16.2	14.6	19.91	15.62
Bank Credit to Small Scale Industries	13.2	9.9	15.88	9.76
Bank Credit to Medium and Large Scale Industries	15.5	11	28.12	16.64
Net Capital Inflows	43.9	6.4	36.46	12.65
GDP/M3	2.16	1.82	1.35	1.27
GDP/M1	6.16	6.01	4.67	5.33
GDP/C	11.11	10.54	6.28	9.26

Source: RBI, Hand Book of Statistics, Various Issues.

24.10.1 Interest Rate and Money Supply

Therefore, one is tempted to question the validity of both, the Classical and Keynesian theories of interest rates. What could be the possible explanation of changes in interest rates in India? Subject to our discussion of the consequences of the administered system of interest rate in this regard, the upward movements in interest rates and prices in our country may perhaps be explained in terms of Wicksell's theory of cumulative process. It can be safely assumed that the level of the 'natural' rate of interest in India has been quite high because of the high rate of planned investment and because of a considerable degree of technological advancement, which has been taking place in India during the planning period. On the other hand, the market rate of interest has been kept at a low level, not warranted by the scarcity of capital, because of the mistaken notion of keeping the cost of investment low in order to induce such investment. As visualised by Wicksell, this caused an upward movement in prices. The inflationary pressures became acute with the beginning of the second five-year plan in which large-scale heavy investment was planned. Over the period, there has been an attempt to adjust the market rate to the natural rate; hence, both prices and nominal rates have moved in the same direction.

Is it not possible to regard the upward movement in interest rates as a matter of adjustment to price expectations? In other words, can the phenomenon under discussion be explained in terms of the 'Fisher effect'? Although there is no doubt that the authorities have administered interest rates in an upward direction as a measure for fighting inflationary pressures, this cannot be regarded as the working of the 'Fisher effect' in the true sense of that term. There are certain difficulties in explaining interest rate movements in India in terms of the 'Fisher effect'. First, the upward adjustment in interest rates has been far short of the expected rate of inflation.[9] If interest rates had increased because of price expectations, they should have increased at a much faster rate than they actually did. As will be shown later, real rates of interest have, in fact, fallen over the period, which is inconsistent with the working of the 'Fisher effect'. Second, it is difficult to determine how far interest rates are influenced by price expectations when interest rates are pegged. Interest rates are likely to be less responsive to price expectations when the tendency of yields to rise is offset or weakened by the policies of the central bank. Third, the universal difficulty of determining and measuring price expectations becomes all the more intractable in India and that is why the price expectations hypothesis suffers all the more in explaining the interest rate behaviour. Normally, some sort of weighted average of past changes in prices is used to measure expected future prices. In India, where the general price level is greatly influenced by the supply of food grains and other agricultural products, the failure of harvest in a year or two would lead to a sharp increase in prices. It is not, however, possible to expect a similar increase in prices over a period in the future from this previous price increase. There are no established cycles in harvests to nullify this argument. In short, past price experience does not altogether determine future price expectations in India. In such a situation, interest rates in the loanable funds market cannot be significantly determined by price expectations.

How does one explain the positive relationship between interest rates and money supply? The relationship between changes in money supply and interest rates in India has been rather different from the one posited in theory; it has been also different from its working in other countries. According to Keynes, an increase in money stock may tend to lower some interest rates; open market purchases by the monetary authorities tend to raise security prices and lower their yields. In India, the RBI in the recent past has been a net seller of government securities. The expansion of money stock in India has taken place largely through the creation of new money and the increase in banks' reserves due to budget deficits. This means that the phenomenon of some sort of mechanical lowering of interest rates due to purchase of government securities by the central bank has been absent in India. Second, the theoretical relationship between money supply and interest rates tends to be true in an economy at, or near-full, employment level, where the income effect (which is positive) on interest rates tends to be weak. In India, increase in nominal income has not been entirely due to an increase in prices; output has also increased during the period under study. Thus, the positive income effect has tended to offset the negative money supply effect on interest rates. Third, faced with the prospect of high increase in prices partly caused by an increase in the money supply itself, the authorities could not have allowed the effect of money supply on interest rates to work in a downward direction. In short, the secular trend of increase in the level of interest rates in India during the period under study had been better explained in terms of the adjustment of the market rate to the natural rate, increase in interest rates to fight inflation and a positive income effect.

[9]It was estimated by P R Brahmananda that the expected rate of inflation in India till the end of 1977 was about 11–15 percent per year. This estimate can be assumed to be relevant for the later period also because inflationary conditions in that period have been more or less similar to those in the earlier period except in the recent past. See Brahmananda, P R, *The Falling Economy and How to Revive It*, The Indian Economic Association, 1977, p. 55.

24.10.2 Interest Rates and Savings

The appropriateness or otherwise of the low interest rates policy in India has to be determined in terms of its impact on the rate and composition of savings. In a capital scarce economy like India, low interest rates are economically and socially undesirable if they act as a disincentive to save. As much national self-sufficiency in savings as possible, is essential for reducing the economic and political costs of capital formation and for minimising instability, volatility, contagion, vulnerability and crises likely to be caused by heavy dependence on foreign capital inflows. Thus, 'to increase the rate of savings' should be regarded as an overriding objective of the macroeconomic policy in India. Now, unmistakable or overwhelming long-term evidence has accumulated through the empirical studies by many scholars, which has established beyond doubt a positive relationship between the interest rates on the one hand, and total savings, financial savings, household savings and corporate savings, respectively, on the other. The downward movement of interest rates in India needs to be halted for attracting foreign savings also. In the recent past, the nature of foreign capital inflows has significantly changed from the official and concessional flows to the private and commercial flows through world debt and equity markets. Such inflows can be expected to take place in substantial amounts only if interest rates in India remain attractive. They can also help in ensuring that substantial capital outflows from India do not occur. The capital flows are quite responsive to variation in interest rates. The net impact of low interest rates on capital account and balance of payments is likely to be unfavourable. It is a fact that higher interest rates in India had attracted substantial amount of funds from abroad during 1990s. The annual average rate of growth of net capital inflows in India declined from 43.9 percent during the high interest phase to 12.65 percent during the current phase (See Table 24.5). From the point of view, India need not follow the interest rates policies in countries such as US and Japan closely and actively. India is not a capital-abundant country as they are. Similarly, the domestic conditions and not the international trends should receive far more weightage in formulating interest rates policy in India.

24.10.3 Interest Rates and Investment

The low interest rates, in theory are supposed to encourage investment, help fight recession, revive the economy and accelerate the rate of economic growth. In practice, such a negative relationship between investment and rate of interest has rarely been found to exist in India. On the other hand, low interest rates may have certain distortionary effects on the nature of growth in the economy. For example, they tend to tilt the factor-price ratio severely against (in favour of) labour (capital), which encourages the substitution of labour by capital and worsen the labour unemployment problem. They also tend to encourage the waste or uneconomic use of resources or the misallocation (inefficient allocation) of resources by both the government and the private sectors. In other words, low interest rates may (a) siphon off resources into uneconomic projects and push the excess-capacity-ridden industrial sector into deeper recession, (b) result in adverse selection that it may distort investment choices or investment pattern so that the projects that are actually unviable may begin to look attractive, (c) lead to increase in speculative activity in forex, money, stock and derivatives markets, and (d) increase volatility in interest rates which is more harmful than high interest rates for most people, except the traders and market operators. As in the case of savings, in the case of investment also, there are many facts, and there is much economic evidence which point towards the inappropriateness of the present interest rates policy in India.

The annual average rates of increase in investment, bank credit to large scale industries, bank credit to small scale industries, bank credit to the commercial sector and industrial production, respectively, have all been lowered during the low interest rates phase than during the high interest rates phase. The demand for credit and investment demand have not revived during the years of one of the lowest levels of interest rates in India. On the other hand, the softening of interest rates has adversely affected banks' willingness to lend to the business and industrial sector. Our comprehensive studies of the interest elasticity of different components of fixed and inventory investments in the 17 industries, the private corporate and public sectors, and the entire economy during the period 1950–1951 to 1977–1978 and its sub-periods have very well established that investment decisions in India have not been affected by interest rates in the theoretically expected manner, that is, interest rates have been mostly positively related to investment in the Indian economy.[10] The log-real investment function for the period 1980–1981 to 2015–2017 presented in Table 24.6 corroborates once again the above-mentioned empirical positive relationship between the rate of interest and investment in India. A study by Athukorala referred to earlier contains interesting findings, that in India, the high real interest rate promotes private sector capital formation by facilitating the accumulation of finance necessary for undertaking investment, that 1 percent increase in the real interest rate is associated with over 2 percent increase in private investment, and that the cumulative net impact of the real rate of interest on investment is positive because its effect is operating through financial intermediation and complementarity outweighs its cost effect.

24.11 DETERMINANTS OF SAVINGS AND INVESTMENTS

LO 6

Understand the determinants of savings and investments and the issue of Relative Rates of Return

Our latest results from the estimation of log-real savings functions for India for the period, 1980–1981 to 2015–2016, reported in Table 24.6, clearly show that the gross total domestic savings, gross total household savings and gross household financial savings are positively related to the rate of interest, while, the gross household real assets savings are negatively related to the interest rate. Interest rate has been a significant factor for gross total domestic savings, gross total household financial savings and total gross investments in India.

Table 24.6 Determinants of Real Savings and Investment in India during 1980–1981 to 2015–2016

	Gross Total Domestic Savings	*Gross Total Household Savings*	*Gross Total Household Financial Savings*	*Gross Total Household Real Assets Savings*	*Total Gross Investments*
Constant	35.29*** (24.69)	28.56*** (19.56)	21.33*** (16.52)	32.50*** (26.89)	19.65*** (15.61)
Interest Rate	0.62** (2.61)	1.33 (1.31)	2.30** (5.12)	0.82 (0.24)	–2.34** (–3.65)

(*Contd.*)

[10]Bhole, L M, *Impacts of Monetary Policy*, Himalaya Publishing House, Mumbai, 1985; and 'Administered Interest Rates in India', *op.cit*.

Growth Rate of GDP	2.061** (4.51)	0.33 (0.40)	0.61 (0.35)	0.96 (0.18)	1.98* (2.25)
Inflation Rate	–1.432** (–2.90)	–0.41 (–0.40)	–1.96* (2.92)	–0.91 (–0.21)	1.66* (2.96)
Total Credit Availability	—	—	—	—	1.56*** (25.63)
Adjusted R^2	0.69	0.56	0.61	0.65	0.78
D-W Statistics	1.62	2.02	1.99	2.89	2.68
F-Statistics	101	78	98	135	198

*Note: (1) Average of bank deposit rates (1–3 years maturity, and above 5 years maturity) and 10 years government bond yield rate have been used as interest rate for savings and investment function, respectively. (2) The values in the bracket show the t-statistics. (3) ***, ** and * show the level of significance at 1, 5 and 10 percent respectively.*

24.12 ISSUE OF RELATIVE RATES OF RETURN

The low interest rates policy has distorted the structure of rates of return on various financial and real assets, and it has thereby distorted the pattern of investment. It has discriminated against bank deposits, small savings, provident funds, other debt instruments and in favour of equities, units, real estate and precious metals. It has been a part of the policy in India to promote the equity culture or equity cult in the country. Investment in equities and units enjoys many attractive fiscal concessions that are not available on bank deposits and other debt instruments; there has not been any restriction any time on the rates of return earned on units and equities; there has not been any attempt any time to reduce these rates of returns which have been generally much higher than the interest rates on bank deposits; and there has been a policy preference to hold down interest rates so as to induce greater investment in units and equities. The low interest rates policy in India has resulted in the misalignment of the returns on financial and real assets, and it has harmed the competitive position of banks and other deposit-accepting institutions *vis-a-vis* mutual funds and stock market. This, however, has not helped to create a robust, dynamic and active primary stock market, to increase productive capital investment, and to enhance the economic growth.

SUMMARY

- Interest rate is the price of the instruments available in the financial market. The changes in the interest rates have the implication on various indicators in the financial markets.
- The period since 1951 can be divided into five different phases of interest policy or system in India.
- The interest rates have increased along with the increase in prices and money supply; this casts doubts on the general validity of the Classical and Keynesian theories of interest rates.
- Wicksell's theory of cumulative process perhaps explains better secular movement of interest rates *vis-a-vis* money supply and prices.
- The upward movement in interest rates reflects the working of 'Fisher effect' only in a modified and adapted form.
- The cost of funds for many borrowers has been much lower than what is indicated by the general level of interest rates due to the policy of concessional interest rates of the government.

- The policy of keeping long-term rates low in order to encourage fixed investment, of raising short-term rates to discourage inventory investment, and the increased supply of long-term funds helps to explain the relationship between short- and long-term rates.
- Interest rates in India were administered by the monetary authorities, and the controls were far more pervasive, direct, and stifling than in other non-communist countries till about 1985.
- The administered system of interest rates had been adopted with a view to maintain interest rates stable and at low levels. This, in turn, had been regarded necessary for helping fixed investment, financing government and priority sectors, equitable income distribution and so on. The system was also expected to enhance the predictability and efficacy of monetary policy.
- As a result of the administered system, (a) interest rates were not properly aligned with each other; (b) the increases in them, which had been by way of 'mark-ups', had been haphazard and *ad hoc*; (c) the levels of interest rates, differences in them and changes in both of these were often not related to risk, liquidity, maturity and demand for and supply of funds; (d) interest rates structure had assumed an exceedingly complex and unmanageable character, and (e) a complex system of quantitative credit controls had come to be instituted as a means of monetary policy.
- The free, flexible and higher interest rates would be conducive for better promotion of savings, efficiency of financial system, efficiency of investment, efficiency of monetary policy and efficiency and equity in government finances.
- The authorities have now liberalised the system by allowing interest rates to be determined by the market forces.
- The real rates of interest have fluctuated in a disorderly manner, and they have mostly remained either very low or negative, except in the recent past.
- It becomes more and more difficult to maintain real rates at positive level as the rate of inflation increases.
- The flexibility and variability of interest rates abroad have been far greater than in India.
- The deregulated system of interest rates might mean greater uncertainty, risk and variability of interest rates.
- In a deregulated set up, banks and FIs have begun fixing and announcing their respective prime lending rates.
- The demand for cheap money policy in India is not convincing. At the same time, interest rates cannot be allowed to attain unduly high level. Unrestrained competition in financial market can lead to overshooting of interest rates, financial and economic instability and low growth rate. There is a need to evolve a 'flexibly regulated' system of interest rates to achieve an appropriate level of interest rates in India.
- An unprecedented, across the board reduction in interest rates in India since 1997 has not helped to achieve the proximate and ultimate developmental objectives.
- Substantial and long-term empirical evidence in India and some other countries shows that the higher (lower) interest rates encourage (discourage) savings but do not discourage (encourage) investment.
- The government and corporates have been the greatest beneficiaries of the soft interest rates policy in India. This policy has hit hard the savers, particularly the small savers and the retired, fixed-income individuals. The social impact of the soft interest policy has been undesirable and this is a serious drawback of the said policy.
- The interest rates policy in India which is oriented towards the convergence of interest rates in India and US needs to be reviewed because these countries are so vastly different from each other in respect of capital availability, stage of growth, availability of foreign capital, and so on.

KEY TERMS

Administered Interest Rate
Fisher Effect
Repo Rate
Reverse Repo Rate
Marginal Standing Facility Rate
Marginal Cost of Funds Lending Rate
Temporal Change
Monetary Policy Corridor
Relative Rate of Return
Short-term Interest Rate
Long-Term Interest Rate
Real Interest Rate

QUESTIONS

1. Highlight the characters of the system of the administered interest rates in India during the period 1961–1985 and specify the reasons why the authorities had imposed controls on interest rates during that period.
2. What are the effects of the system of administered interest rates on interest rates and the credit control mechanism in India?
3. Analyse the trends and features of various interest rates during the period 1970–2003.
4. What are the temporal changes that have taken place in the case of level and structure of interest rate after the introduction of the deregulation system?
5. Which macro-economic theory could be the possible explanation of changes in interest rate in India?
6. What is the relationship between short-term and long-term interest rates?
7. 'Over a period of time, the spread between long-term and short-term interest rates has declined'. Explain.
8. What is the extent to which interest rates in India and abroad are correlated and how the interest rate differential between India and other countries has behaved?
9. What should be the appropriate interest rate policy in India?

Glossary

Accrued Interest: Interest that has been earned but not yet received.

Accumulation: It is a careful and planned buying of a company's shares in small numbers so as not topush the price up, but gradually building up a large holding in the company.

Acquisition: It refers to one company's taking over controlling interest in another company.

Active Markets: These are the markets for securities or commodities which are characterised by fre-quent and large volume of trading, and in which the difference between buying price and sellingprice is small.

Active Securities: These are the shows and other instruments in which frequent, day-to-day deals or trades take place.

$$\textbf{Actual Margin} = \frac{\text{Current value of securities} - \text{Amount borrowed}}{\text{Current value of securities}}$$

Advance-Decline (A-D) Index: It is calculated as

$$\frac{\text{Number of traded shares which have risen in price}}{\text{Number of shares which have fallen in price}}$$

It is calculated for a given exchange or market and it helps to detect bullish or bearish expectations or trends on the stock market.

Adverse Selection: It refers to a situation in which at higher interest rates, the relatively safer borrowers drop out of the credit market and borrowers with higher risks undertake investment activity leading to deterioration in the quality of banks' portfolios.

Agency Costs: Costs that stem from conflict of interests between managers and stockholders and between stockholders and bondholders.

Aim: It defines the investment goal of the scheme. Based on the aim the fund gets names as an income fund, a growth fund or a balanced fund.

Allocational Efficiency: When financial markets channelise resources into those investmentprojects and other uses where marginal efficiency of capital adjusted for risk differences is the highest,they are said to have achieved allocational efficiency.

Allotment of Securities: It is the decision taken by the company issuing fresh capital to approve oraccept in part or in full the number of security (shares) applied for by a given investor.

Amalgamation: It is two or more separate companies joining together to form one company so that their pooled resources generate greater common prosperity. It can be called a merger also.

American Depository Receipt (ADR): A certificate of ownership issued by a US bank as a convenience to investors in lieu of the underlying foreign corporate shares it holds in custody.

American Option: It is an option which is exercisable anytime on or before a specified date.

Amortisation: (i) Repayment of loan in installments over a period of time, or (ii) write-off of anexpenditure (like issue cost of shares) over a period of time.

Annuity: A fixed amount of cash to be received every year for a given period of time.

Application Money: It is the amount of money an investor has to pay with the application for purchasing securities which are newly issued. It is usually less than the full value of the security at which it is issued.

Arbitrage: It means buying and selling of the same share, commodity, derivatives etc. in differentmarkets at the same time with a view to benefit from price differentials between different markets.An arbitrageur buys in the lower market and immediately or simultaneously sells in the highermarket. Arbitrage is meant to maximise profits.

Arbitrage Pricing Model (APT): This theorypredicts a relationship between the returns of a portfolio and the returns of a single asset through a linearcombination of many independent macro-economic variables.

Arbitragers: Investors who seek discrepancies in security prices in order to earn riskless returns. Ask Price: The price at which the specialist or dealer offers to sell shares.

Asset-Liability Management: It is defined as to measure and manage the institutions' investment and liability risks to meet solvency, marketing, and profitability targets.

Asset Management Company: Handles the daily administration of the fund's activities and usually doubles as fund manager.

Asset Stripping: When the assets of the company are sold off for making quick profit instead of runningthe company for steady and long-term gain, the asset stripping is said to have occurred.

Assignment: It refers to the transfer of all rights to the principal and interest from the seller to the buyer.

At Par: When the face value of the security is equal to the price at which it is sold or bought, it is saidto be sold or bought at par.

Auction: Auction is a process of calling of bids with an objective of arriving at the market price.

Auction Market: A securities market where the prices of securities are determined by the actions of buyers and sellers transacting at a specified location.

Authorised Share Capital: Maximum number of shares or maximum amount of share capital that a company can issue, as specified in the firm's articles of incorporation.

Authorities: The Treasury, the Central Bank, and relevant ministers who are responsible for the conduct of monetary and fiscal policies and for managing the gilt-edged market.

B

Backwardation: When futures price prevail below the expected future spot price, it is known as backwardation.

Badla (Contango): It is a percentage paid by the buyer of shares for the postponement of the transfer of those shares from one settlement day to the next settlement day.

Balance of Payments: It is the balance sheet of the nation in respect of its international transactions ingoods, services, and finance or capital. It has two parts, current account and capital account.

Balanced Fund: It provides both capital appreciation and periodic returns over a long period of time. The portfolio of these kinds of funds constitute of both equity and debt.

Balloon Payment: Large final payment (e.g., when a loan is repaid in installments).

Bank Draft: It is an instrument in which a party or drawer instructs the bank (drawee) to pay, on demand or on certain date, a specified amount of money to the payee. If the payment is to be made on demand, it is known as demand draft.

Bankers Acceptance: A written demand, which has been "accepted" by a bank i.e., the bank has agreed to pay a specified amount at a future date.

Bankruptcy: A state in which a firm (or individual) is unable to meet its (his) obligations and, hence, its (his) assets are surrendered to a court for administration.

Bank Rate: Bank Rate is the rate at which central bank allows finance to commercial banks in the long run.

Basic Yield: It is the lowest limit of yields actually attained in the market by high grade bonds of a given maturity and a given class.

Basis: The Difference between spot price of an asset and its future price. Even through the spot and future prices generally move in tandem with each other, the basis is not constant.

Basis Risk: The risk that the interest rate for different assets and liabilities may change in different magnitudes is called basis risk.

Basis Point: One hundredth of one per cent.

Bear Market: A market dominated by operators who have a pessimistic view of the future. A period of time during which indicators of the stock market decline.

Bearer Bond: The bearer or the holder of the bond is the owner, so the bond issuer does not keep any record of ownership.

Bearer Security: A security for which its possession is the primary evidence of its ownership.

Beneficial Owner: He is the shareholder or investor of the company, while a Depository is the Registered owner of the shares or securities held by it on behalf of the former.

Beta: A measure of volatility or the relative systematic risk faced by an asset or portfolio or project return. Beta is calculated as the covariance between returns on the asset and returns on the market portfolio divided by the variance of returns on the market portfolio. Or, it is typically found by regressing stock or portfolio return on a proxy for market return. It measures the volatility of the portfolio related to the stock market index like the BSE Sensex. A portfolio with a beta of 1.25 would mean that the portfolio is expected to be 25 per cent morevolatile than the sensitive index itself.

Beta Coefficient or Factor: It is a measure of performance of a particular share or class of shares in relation to the general movement of the market in terms of the price of respective shares. It indicates systematic risk of investment in a share. It is calculated as the covariance between returns on the asset and returns on the market portfolio divided by the variance of the returns on the market portfolio.

Bid-Ask (Offer) Price and Spread: It is the price which is quoted by the seller who want to sell the assets. The different between these two prices is called Bid-Ask spread or Bid-offer Spread or Jobbing spread. Sometimes, it is also called impact cost.

Bid or Tender System: A predetermined quantity of securities that is offered for sale and sold or "tendered" to the highest bidder.

Bid Price: The price that a dealer is willing to pay to purchase a financial instrument or any other asset.

Bill Discounting: Receiving payment on a bill of exchange prior to the bill's maturity by surrendering the bill for face value less applicable interest for the time remaining to maturity.

Bill of exchange: The financial instrument which is traded in the bill market is a bill of exchange.

Black Market: An illegal market that often arises when price controls or official rationing lead to shortages of goods, services, or assets.

Blue Chip Stocks: Stocks or shares of the highest quality, with long records of earnings and dividends—shares of well known, stable, mature companies.

Bonus Shares: Shares issued to existing shareholders as a result of capitalisation of reserves.

Bonds: Contractual liabilities that obligate the issuer to pay a specified amount (the par, face, or maturity value) at a given date in the future (maturity date), generally with periodic interest payments in the interim at a fixed rate (coupon rate).

Bonus Issue: When an issuer makes an issue of securities to its existing shareholders as on a record date, without any consideration from them, it is called a bonus issue.

Book Building: It is a mechanism through which a demand for the securities proposed to be issued by the company is elicited and built-up and the price for such a security is assessed for the determination of the quantum of such securities to be issued.

Book Closure: It refers to closing the register of members by the company for a certain period (from one week to a month). This is done before declaring dividend, or issuing bonus shares, or right shares by the company. As a result, only those shareholders whose names appear on the register after the book closure are eligible to receive dividends, or bonus shares, or right shares.

Book Value: The cost price of an asset less accumulated depreciation.

Bretton Woods Agreement: An agreement, entered in 1946, whereby each member government pledged to maintain a fixed, *or* pegged, exchange rate for its currency vis-a-vis the dollar or gold. These fixed exchange rates were supposed to reduce the risk involved in international transactions, thus promoting growth in world trade.

Bridge Loan: Temporary finance provided to a project until long-term arrangements are made.

Broad Market: The market which attracts funds in greater volume and from many investors.

Broker: A person (agency) who arranges the purchase and sale of an asset by acting as an intermediary between the purchaser and the seller.

Bull and Bear Markets: Bull market is characterised by a prolonged rise in share prices, sustained by buying pressure of actual investors or bulls. Bear market, on the other hand, is the market which is characterised by a prolonged period of falling share prices and selling pressures from investors and bears.

Bulls and Bears: Bulls are those market participants (brokers, operators) who expect the market price to rise, while bears are those who expect the market price to fall.

Business Risk: It is the uncertainty of income flows that is caused by the nature of afirm's business.

C

Call Money: Loaned funds that are repayable upon the request of either party.

Call Money Market: It is that part of the national money market where the day-to-day surplus funds, mostly of banks, are traded in.

Call Provision: A feature of a bond that entitles the issuer to retire the bond before maturity.

Call Option: An option that gives its holder the right to buy an asset at a fixed price during a certain period.

Call Rate: The rate of interest paid on call loans is known as the call rate.

Call Risk: It is associated with the corporate bonds which are issued with call-back provision or option whereby the issuer has the right of redeeming the bonds before their maturity.

CAMEL: It is a system of bank rating which serves as an effective supplement to bank supervision. It refers to five key criteria, viz., Capital adequacy (C), asset quality (A), management (M), earnings(E), and liquidity (L) against each of which a bank's financial health is evaluated on a scale of "1"to "5", where I denotes the highest rating and "5" the lowest.

Cap: A ceiling on the interest rate on a floating-rate note.

Capital Account: That part of a country's balance of payments which records results of public and private international investment and lending activities.

Capital Flight: The transfer of capital abroad in response to fears of political risk and due to changes in other factors such as interest rates.

Capital Gain and Loss: The difference between the price that is originally paid for a security and cash proceeds at the time of maturity (face value of a bond) or at the time of sale (selling price of a bond ***or*** stock). When the difference is positive, it is a gain, but when it is negative, it is a loss.

Capital Gains Yield: Capital gain as a percentage of the value of a security at the beginning of the time period. Capital Market: Market in which financial instruments with maturities greater than one year are bought and sold.

Capital Markets: Capital markets deal with the long-term (maturity period above 1 year) claims.

Capital Asset Pricing Model: A theory which shows the relationship between risk and return for efficient and inefficient portfolios.

Capital Adequacy Ratio: Total Capital of the Bank/Risk weighted Assets.

Capital Market Line: The relationship between expected rate of return and risk (measured by standard deviation) on efficient portfolios.

Capital Rationing: To restrict the availability of funds for investment purposes.

Cash Management Bill: It is new short-term instrument issued by RBI to meet the temporary mismatches in the cash flow of the Government.

Capital Structure: The composition of a firm's long-term financing consisting of equity, preference shares, and long term debt.

Cash Reserve Ratio: The CR Rrefers to the cash which banks have to maintain with the RBI as a certain percentage of their demand and time liabilities.

Cash Credit: An arrangement whereby the bank gives a short-term loan against the self-liquidating security.

Cash Discount: A discount given to buyers for cash rather than credit purchase.

Certificate of Deposits (CDs): CDs are (represent) bank deposit accounts which are transferable from one party to another. They are marketable or negotiable short-term instruments in bearer form and are known as Negotiable Certificates of Deposit (NCDs) also.

Certificate less Trading: Trading without any certificate being issued to prove a security's ownership. Ownership is recorded in the broker's books and client's contract note.

Characteristic Line: A regression line representing the relationship between the return on an individual security and the return on the market portfolio. The slope of the characteristic line is the beta of the security.

Close Ended Fund (CEF): The CEFs do not sell any additional units after the sale ofa fixed number of units at the initial or inception stage, during a fixed period of time when the issue isopen for subscription.

Collateral: Asset which serves as security for a loan.

Collateralised Borrowing and Lending Obligations (CBLO): It is a product of the Clearing Corporation of India Ltd (CCIL) and is a mechanism through which bank and non-bank entities can lend or borrow funds to each other through the Negotiated Dealing System (NDS). Financial entities such as mutual funds, primary dealers, banks and insurance companies are participants in this market.

Commercial Paper (CP): CPs are short-term usance promissory notes with fixed maturity issued mostly by the leading, nationally reputed, credit-worthy, andhighly-rated large corporations.

Competitive Bidding: In a competitive bidding, an investor bids at a specific price / yield and is allotted securities if the price / yield quoted is within the cut-off price / yield.

Compensating Balance: Non-interest bearing bank deposits held by the corporates, more than what is required, strictly for transaction purposes, in order to compensate banks for their services.

Compound Interest: Interest payable (receivable) on interest.

Compounding: The process of determining the terminal value of an amount when compound interest rate applies. It can be on a continuous basis or at fixed time intervals.

Contango: Under normal market condition, futures contracts are priced above the expected future spot price. This is known as contango.

Conversion Premium: In the case of convertible securities, it is the difference between the market price of the security and its conversion value.

Conversion Price: The par value of a bond or preferred stock divided by the conversion ratio.

Conversion Ratio: The number of equity shares exchangeable per bond or preferred stock at the time of conversion.

Conversion Value: A convertible security's value based on the current price of the common stock.

Convertible Security: Bond or preferred stock which is convertible into equity shares generally at the option of the holder.

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Co-operative Bank: A co-operative bank is a financial entity which belongs to its members, who are at the same time the owners and the customers of their bank.

Correspondent Banks: These banks provide services to their multinational (MNC) clients to carry out their business worldwide through its local bank.

Country Risk: The uncertainty or variability of return in respect of an investment in a foreign country is known as country risk.

Coupon Rate: It is the interest rate received on the face value or the par value of the bond.

Conduct regulation: It is used to regulate the behaviour of producers and consumers in the market.

Collateralised Borrowing and Lending Obligation (CBLO): CBLO is another money market instrument operated by the Clearing Corporation of India Ltd. (CCIL), for the benefit of the entities that have either no access to the interbank call money market or have restricted access in terms of ceiling on call borrowing and lending transactions.

Covenant: A definite provision in a loan contract.

Covered-interest Arbitrage: Movement of short-term funds between two currencies to take advantage of interest differentials with exchange risk eliminated by means of forward contracts.

Credit: It is a sum of money to be returned normally with interest; it refers to a debt of economic unit.

Credit Default Swap: It consists of swapping, usually on an ongoing basis, the risk premium inherent in an interest rate on a bond or a loan in return for a cash payment that is made in the event of default by the debtor.

Credit Rating Agency is a company which rates the debtors on the basis of their ability to pay back the debt in timely manner.

Credit Risk: It refers to the potential inability of a borrower to comply with contractual credit terms and bears the closest resemblance to the primary risk in domestic lending.

Credit Crunch: It refers to a situation where supply of credit falls even though there is sufficient demand for it.

Credit Linked Note: It is an instrument whose cash flow depends upon a credit event, which can be a default, credit spread, or rating change.

Credit Risk: It is defined as the potential that a bank borrower or counter party will fail to meet its obligations in accordance with agreed terms.

Cross-rate: The exchange rate between two currencies, neither of which is the U.S. dollar, calculated by using the dollar rates for both currencies.

Cum Dividend: With dividend.

Cum Rights: With rights.

Cumulative Dividends: A feature of preferred stock that requires all past dividends on preferred stock to be paid before any equity dividends are paid.

Currency Swap: A currency swap is a contract exchanging foreign currency in the spot market with a simultaneous agreement to reverse the transaction in the forward market.

Current Yield: The yield on a security resulting from dividing the interest payment or dividend on it by its current market price.

Cum Dividend: With dividend.

Cum Rights: With rights.

Cumulative Dividends: A feature of preferred stock that requires all past dividends on preferred stock to be paid before any equity dividends are paid.

Current Deposits: These are chequable accounts and there are no restrictions on the amount or the number of withdrawals from these accounts.

Current Account: That part of a country's balance of payments which records flow of goods, services, and unilateral transactions (gifts) between countries.

Current Yield: The yield on a security resulting from dividing the interest payment or dividend on it by its current market price.

D

Dealer: An individual (firm) who buys and sells securities on his or her own account.

Debenture: An instrument for raising long-term debt. Debentures in India are typically secured by tangible assets. In the US, they are secured only by a general credit of the company.

Debt Swap: A set of transacations (also called a debt-equity swap) in which a firm buys a country's dollar bank debt at a discount and swaps this debt with the Central Bank for local currency that it can use to acquire local equity.

Debit Cards: Debit cards are used to electronically withdraw funds directly from the cardholders' accounts and it is also used for buying the commodities directly from the shops.

Debt Swap: A set of transacations (also called a debt-equity swap) in which a firm buys a country's dollar bank debt at a discount and swaps this debt with the Central Bank for local currency that itcan use to acquire local equity.

Deep Market: The market in which there are always sufficient orders for buying and selling at both below and above the market price.

Default Risk: The risk that a borrower may not repay principal and/or interest as originally agreed.

Deficit Savings Unit: An economic unit whose current income is less than current expenditures.

Defined Benefits Pension Plan (DBPP): Under DBPP, the final pension is pre-defined based on the final salary and the period of service.

Defined Contribution Pension Plan (DCPP): In DCPP, the employee and employer make a predetermined contribution each year, and these funds are invested over the period of time till the retirement of employee. Whatever the value of these investments at the time of retirement, the employee will get a certain amount which he would use to purchase an annuity.

Demand Bill: It is payable immediately "at sight" or "on presentment" to the drawee. A bill in which no time for payment is specified is also considered to be a demand bill**.**

Demonetization: It is the act of stripping a currency unit of its status as legal tender.

Derivatives: These are contracts which are written between two parties (counter parties)and whose value is derived from the value of underlying widely-held and easily marketable assets such as agricultural and other physical (tangible) commodities or currencies or short-term and long-term financial instruments or intangible things like commodities price index (inflation rate), equity price index or bond price index.

Devaluation: The devaluation (revaluation) of a currency refers to a policy-determined decrease (increase) in its official exchange rate or par value relative to gold or another currency.

Depreciation: Depreciation (appreciation) refers to a decline (increase) in the price or exchange rate of a given currency relative to a foreign currency in the market under the flexible exchange rate system.

Diffrent Return (Alpha): Jensen's measure of portfolio performance. It is the difference between what the portfolio actually earned and what it was expected to earn given its level of systematic risk.

Direct Financing: The provision of funds for investment to the ultimate user of the funds (deficit savings unit) by an ultimate investor (surplus spending unit).

Discount: The amount by which a bond or preferred stock sells below its par or face value. For closed- end investment companies, the amount by which the net asset value exceeds the current market price. In foreign exchange market, it is the amount by which forward price is less than the spot price. In general, it means an extent of reduction in the price/value of the asset/product which is given when it is sold.

Discounting: The process of finding the present value of a future cash flow or a series of future cash flows.

Discount Pricing: Setting the price of a financial instrument at the face value less the amount of interest that will have to be paid till the maturity of the asset.

Disintermediation: The withdrawal of funds from financial intermediaries for the purpose of direct investment or direct financing.

Diversifiable Risk: The portion of a security's risk that can be eliminated by diversification.

Diversification: Diversification means the existence or the development of a very wide variety of financial institutions, markets, instruments, services, and practices in the financial system.

Dividends: Periodic payments to the owners of corporate stock.

Dividend Yield: Annual dividend stated as a percentage of a share's market price.

Dividend Valuation Model: The model which states that the current price of a stock is equal to the discounted value of its all future dividends.

Doubtful Asset: An asset of a bank is required to be classified as doubtful, if it has remained NPA for more than 12 months.

E

Earnings Yield: The ratio of earnings per share to market price of the share.

Earnings Multiplier Model: The model which states that the price of a stock is equal to the product of its earnings and a multiplier.

Economic Instability: It refers to marked ups and downs in the economic system as a whole in respect of monetary, financial, and real variables.

Efficient Market: A market in which asset prices reflect all available information quickly and accurately. In such a market all new information is quickly absorbed by market participants and is quickly incorporated into market prices.

Efficient Market Hypothesis: The idea that the prices of securities reflect their economic or intrinsic values.

Efficient Portfolio: A portfolio which has the largest expected return for a given level of risk or the smallest risk for a given level of expected return.

Entry Load: It is a sales charge that the investors pay when they buy some units of a mutual fund scheme.

Equity Fund: A fund which invests primarily or heavily in common stocks.

Escrow Account: It is an account for which bank acts as an uninterested third party (custodian/ depository) to ensure compliance with the terms of the deed between two parties only upon the fulfillment of some stated conditions. It becomes operative as soon as the stated event occurs. Banks hold such accounts in which funds accumulate to pay taxes, insurance on mortgage property, etc.

Eurobonds: Bonds issued by parties outside their domestic financial markets, may be in more than one currency.

Eurocommercial Paper: Short-term unsecured notes issued by firms in markets outside their domestic markets.

Eurocurrency: A currency deposited in a bank outside the country of its origin.

Eurodollars: Deposits denominated in US dollars issued by banks outside the United States. Even if the bank's home office is in the US, the deposit is considered a eurodollar deposit.

Euroequities: Common and preferred stocks offered outside the issuer's domestic capital market.

Euronote: A short-term note issued outside the country of the currency it is denominated in.

European Currency Unit (ECU): A composite currency consisting of fixed amounts of 10 European currencies.

European Monetary System (EMS): Monetary system formed by the major European countries under which the members agreed to maintain their exchange rates within a specific margin around agreed- upon, fixed central exchange rates. These central exchange rates are denominated in currency units per ECU.

European Option: It is an option which is exercisable only on a specified date/maturity or expiry date. Ex Ante: Before the fact, what is expected to occur, what is anticipated.

Ex Dividend: Without dividend.

Ex Post: After the fact, what has actually occurred.

Ex Rights: Without rights to buy shares in the company's rights issue.

Exchange Rate: The exchange rate (ER) is the price of one country's currency (money) in terms of another country's currency (money).

Exchange Rate System: It refers to the manner in which the exchange rate of domestic currency in terms of other currency (or currencies) is determined. For example, if the exchange rate of rupee in terms of US dollar is determined by free market forces of demand for and supply of different currencies, it is known as a freely fluctuating or floating exchange rate system.

Exit Load: It is the amount of money that the investor needs to pay to the mutual fund companies when intend to exit from a scheme.

Exchange Rate Risk: It refers to cash-flow variability experienced by economic units engaged in international transactions or international exchange, on account of uncertain or unexpected changes in exchange rates.

Expected Return: Expected Return is an anticipated, predicted, desired, ex-antereturn, which is subject to uncertainty.

Exercise Price: The price at which the holder of a call option may buy an asset, or the holder of a put option may enforce a sale. Also known as the Striking Price.

Expectation Theory of Interest Rate: It is posited that today's long-term rate is the unbiased (arithmetic or geometric) average of the current short-term rate and the successive forward or expected one-period short-term rates during the period of long-term loan.

Exotic Derivatives: The derivatives which have many non-standardised features, which might appeal to special classes of investors, are known as exotic derivatives. They are not exchange-traded, and they are structured between parties on their own.

Expense Ratio: The ratio of total expenses to annual average net asset value. This measures the fund's expense performance.

Exercise Value: For a call option, the amount by which the striking price is below the underlying investment; for a put option, the amount by which the striking price is above the underlying investment.

Expiration Date: In the case of options, the last date at which an option can be exercised.

F

Factoring: Sale of receivables to a financial institution usually on a 'non recourse' basis.

Fama and French Three Factor Model: A factor model that expands on the capital asset pricing model (CAPM) by adding size and value factors in addition to the market risk factor in CAPM.

Fiat Money: Non convertible paper money.

Fiduciary: Of a trust or trustee; held or given or issued on trust.

Finance Ratio: It is the ratio of total issues of primary and secondary claims to national income.

Finance: It is monetary resources comprising debt and ownership funds of the State, company or person.

Financial Assets: The financial asset represents a claim to the payment of a sum of money sometime in future (repayment of principal) and/or a periodic (regular or not so regular) payment in the form of interest or dividend.

Financial Engineering: Developing new financial products by innovatively combining or breaking existing financial products.

Financial Inclusion: It is the process of ensuring access to appropriate financial products and services needed by all sections of the society in general and vulnerable groups such as weaker sections and low income groups in particular at an affordable cost in a fair and transparent manner by mainstream institutional players.

Financial Institutions: Financial institutions are business organisations that act as mobilisers and depositories of savings, and aspurveyors of credit or finance.

Financial Integration: It refers to the establishment of close connections or effective linkages between different constituents or parts, and between different sub-parts of the financial system.

Financial Intermediation: The process of facilitating the flow of funds from surplus spending units (SSUs) to deficit spending units (DSUs) through financial intermediaries, i.e., with primary securities (issued by DSUs) held by financial intermediaries and secondary securities (issued by financial institutions) held by SSUs.

Financial Inter-relation Ratio: It is the ratio of financial assets to physical assets in the economy.

Financial Markets: Financial markets are the centres or arrangements that provide facilities for buying and selling of financial claims and services.

Financial Reforms: Financial reforms involve instituting policies which will increase the allocative efficiency of available saving, promote the growth of real sector, and enhance the health, stability, profitability, and viability of the financial institutions.

Financial Repression: It represents the economic conditions in which the government's regulatory and discriminatory policies distort financial prices or interest rates (interest rates are kept low or negative), discourage saving and investment, and misallocate financial resources. Government- directed credit programmes dominate in a repressed financial system.

Financial Risk: This risk is associated with the use of debt financing by firms or companies.

Financial System: Financial systems are made of different intricate and complex models that portray financial services, institutions and markets that link institutions, markets, financial instruments and financial services, which cater the financial services for various stakeholders operating in the financial system like depositors, lenders, borrowers, government and others.

Financialisation of Saving: Saving in the form of financial assets other than currency.

Fiscal Policy: The policy of government with respect to government revenues and expenditures.

Fisher Effect: It states that the nominal interest differential between two countries should equal the inflation differential between those countries. It also means that in a domestic economy, the nominal rate of interest reflects changes in inflation rate.

Fixed Exchange Rate: An exchange rate whose value is not determined in the foreign exchange market; it is the rate determined by the policy makers in the country.

Fixed-Income Securities: Securities with specified payment dates and amounts, primarily bonds and preferred stock.

Floating Exchange Rate: An exchange rate whose value is determined in the foreign exchange market.

Floating Lien: General lien against a company's assets or against a particular class of assets.

Floating-rate Bond: Bond whose interest rate varies with changes in market interest rates.

Follow-on Public Offer(FPO). It is defined as a process by which a company, which is already listed on an exchange, issues new shares to the investors or the existing shareholders, usually the promoters. FPO is used by companies to diversify their equity base.

Foreign Bond Market: That portion of the domestic bond market that represents issues floated by foreign companies or governments.

Foreign Bonds: Bonds issued in domestic financial markets by foreign entities, and usually denominated in domestic currency, but occasionally denominated in another currency also.

Foreign Direct Investment (FDI): It is defined as the investment by a foreign company in a hosting country by setting up a wholly subsidiary or getting into a joint venture for the business.

Foreign Equity Market: That portion of the domestic equity market that represents issues floated by foreign companies.

Foreign Exchange Market: It is the market in which different currencies (i.e. currencies of different countries) are bought and sold. The price in this market is the foreign exchange rate.

Foreign Institutional Investment (FII): It is defined as the investment made by a foreign investor in the shares of company that is listed in hosting country or in bonds offered by the hosting country.

Foreign Market Beta: A measure of foreign market risk that is derived from the capital asset pricing model.

Forfaiting: It is a service which enables exporters to convert their credit sales into cash sales by discounting their receivables with an agency called "forfaiter".

Forward Contract: An agreement between two parties to exchange an asset for cash at a predetermined future date for a price that is specified today.

Forward Cover: Forward purchase or sale of foreign currency to offset an anticipated future cash flow. Forward Differential: Annualised percentage difference between spot and forward rates.

Forward Exchange Rate: Exchange rate fixed today for exchanging currency at some future date. Forward Interest Rate: Interest rate fixed today on a loan to be made at some future date.

Forward Rate: Exchange rate applicable to a transaction which will occur at a specified point of time in the future.

Free Float: An exchange rate system characterised by the absence of government intervention. Also known as a clean float.

Front Running: When the brokers trade on their own behalf, ahead of their customers' orders, it is called front running.

Full Insurance Efficiency: This indicates the extent of hedging against possible future contingencies.

Full-service Lease (Rental Lease): Lease in which the lessor promises to maintain and insure the equipment.

Functional or Operational Efficiency: The market which minimises administrative and transactions costs, and which provides maximum convenience (minimum inconvenience) to borrowers and lenders while performing the function of transmission of resources, and yet

provides a fair return to financial intermediaries for their services, is said to be operationally or functionally efficient.

Fund Manager: An individual or an organization which makes the investment decision on behalf of the fund.

Fundamental Analysis: The idea that a security has an intrinsic value at any time which is a function of underlying economic variables. By analysing these variables, intrinsic value can be estimated.

Fundamental Valuation Efficiency: When the market price of a security is equal to its intrinsic value or investment value, the market is said to be efficient.

Funded Debt: Debt that matures after one year.

Funded Pension Plan (FPP): If the benefits promised by the PP are secured by assets specifically dedicated for that purpose, it is called a FPP.

Future Value: Also referred to as compound value. The terminal value of a beginning amount of money compounded at a given interest rate over a given period of time.

Futures Contract: An agreement to exchange a standard quantity of an asset at a specified date in the future at a predetermined price.

G

G-5 Nations: A group of five rich and powerful nations—the United States, France, Japan, Great Britain, and Germany—that meets periodically to coordinate economic policies. Also known as the Group of Five.

G-7 Nations: The G-5 plus Canada and Italy. Also known as the Group of Seven.

Gilt-edged Market: The market for government securities.

Globalisation: It indicates the extension of activities of a financial system beyond the national boundaries.

Gnomes: Persons with sinister influence in the field of finance. They are operators in foreign exchange market, bankers, or financiers, money exchangers who are very clever, who do not draw attention to themselves, who remain incognito wherever they go. Their identity is not known to the rest of the world.

Going In The Tank: When the security loses its value fast or it has already lost its value, it is said to be (have) going (gone) in the tank.

Going Private: A process of change of ownership from public to private is called as going private.

Going Public: A process of change of ownership from private to public is called going public.

Going-concern Value: This concept applies to a business firm as a continuing operating unit.

Gold Standard: A system of setting currency values whereby the participating countries commit to fix the prices of their domestic currencies in terms of a specified amount of gold.

Growth Fund: The fund whose portfolio consists of investments which have potential for sourcing income at regular intervals. The primary emphasis is on regular return.

Growth Stocks: Stocks of companies that have an opportunity to invest money to earn more than the opportunity cost of capital; the shares on which the return has been increasing and is expected to increase in future.

H

Hedge Funds: These are assorted investment pools which use an array of hedging techniques to reduce portfolio volatility

Hedge: One investment purchased against another investment in order to counter any loss made by either.

Hedging: Hedgers are people who try to minimise risk or who try to protect themselves by buying (holding) different types or kinds of shares and/or assets and selling them so that they are able to set off their losses with gains. Hedging is meant to minimise losses, or investment risk, not to maximise profits. This is achieved because while one kind of shares or assets may fall in prices, others may rise in prices. It is the price which is quoted or provided by the buyer who wants to buy the assets.

Herfindahl-Hirschman Index (HHI): It is a commonly accepted measure of market concentration. It is calculated by squaring the market share of each firm competing in the market and then summing the resulting numbers. Markets in which the HHI is between 1000 and 1800 points are considered to be moderately concentrated and those in which the HHI is in excess of 1800 points are considered to be concentrated

Holding Company: A company which holds a controlling interest in one or more other companies which are referred to as subsidiaries.

Holding Period Return: The total return from an investment for a given period of time, including both yield and capital gain or loss. It may be stated on the basis of 1.0, which represents no gain or loss.

Horizontal Price Movement: It is the movement of share price within a narrow range of ups and downs over an extended period, say, six months.

Hostile Takeover: It refers to takeover of a company by an individual, or a group or another company which does not approve of the management of the target company or its corporate philosophy.

Hot Money: It means short-term funds which fly from centre to centre in the world to secure higher interest rate or to avoid political or other risks.

Hurdle Rate: In investment decision making, the minimum acceptable rate of return on a project.

I

Impact Cost: It is the difference between Bid-Ask (Offer) prices.

Implied Volatility: Implied volatility is the estimate of how volatile the underlying will be from the present until the currency of option.

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Income Bonds: Bonds on which interest is payable only if earned.

Income Fund: It provides regular and constant income to the investors. The portfolio of these funds primarily hold a major proportion of fixed income securities such as government securities, bonds, corporate debentures, money market instruments.

Indenture: A formal agreement between the issuer and the purchaser of a bond.

Index Derivative: It is a derivative whose underlying is some index number of prices of financial instrument at a given market.

Index Fund: It is a fund which invests in the price index of a security (say equity index) with an objective to generate returns equivalent to the return on index.

Index Funds: These Funds are designed to replicate the performance of a well-established stock market index ora particular segment of the stock market.

Indexed Bonds: Bonds on which payments are linked to a price index.

Indirect Financing: The process by which deficit spending units obtain funds from financial intermediaries who, in turn, them from ultimate surplus spending units.

Inflation Premium: A premium for anticipated inflation that investors require in addition to the pure rate of interest.

Inflation Premium: A premium for anticipated inflation that investors require in addition to the purerate of interest.

Inflation Risk: It is the risk that the real return on a security may be less than thenominal return.

Information Arbitrage Efficiency: This is the degree of gain possible by the use ofcommonly available information.

Initial Margin = $\frac{\text{Amount of money investor puts up}}{\text{Total value of transaction}}$

Initial Public Offer (IPO): It is the selling of securities to the public in the primary market.

Initial Public Offering: When a corporation first decides to issue stock to public to raise funds it engages in an initial public offering.

Insider Trading: It is trading in security or commodity on the basis of inside information i.e. information about the organisation which is available to the people belonging to that organisation.

Insolvency: If the borrower (say, a company) is unable to pay its creditors because it does not have liquid funds, he is said to be technically insolvent. The creditor then can sue the company which may have to sell off its assets to meet the obligation. If the company's assets fall below its liabilities, then company is said to be bankrupt, which is a next stage of insolvency.

Instability: It means changeability, sudden or easy changeability in value, waveringness or fickleness.

Institutionalisation of Saving: The proportion of savings held in the form of financial assets issued by financial institutions.

Insurance Policy: It is the contract between the insured (policy holder) and the insurer (insurance company).

Insurance: is a form of financial risk management tool in which the insured transfers the risk of a potential financial loss to the insurance company (insurer).

Interest Agio: Difference between the interest rates of two countries.

Interest Rate Futures: Futures contracts on fixed-income securities such as treasury bills, bonds, and CDs.

Interest Rate Options: Option contracts on fixed-income securities such as treasury bonds.

Interest Rate Parity: The concept that the difference between the interest rates in two countries is equal to the difference between the forward and spot rate of their respective currencies.

Interest Rate Risk: The risk arising from a change in the price of a security resulting from a change in market interest rates.

Interest Rate Spread: The difference between the rate of return from earning assets and the rate paid on interest-bearing liabilities.

Intermediation Ratio: It is the ratio of secondary issues to primary issues, which indicates the extent of development of financial institutions as mobilisers of funds relative to real sectors as direct mobilisers of funds. It indicates institutionalisation of the financial activity in the economy.

Internal Rate of Return: It is the rate of discount which makes the present value of all the revenues (cash inflows) from the investment equal to the total cost of that investment.

International Diversification: The attempt to reduce risk by investing in more than one nation. By diversifying across nations whose economic cycles do not perfectly coincide in phases, investor scan typically reduce the variability of their returns.

International Fisher Effect: It states that the interest differential between two countries should be an unbiased predictor of the future change in the spot rate.

International Funds: They invest almost their entire portfolio in non-domestic markets.

International Monetary System: The set of policies, institutions, practices, regulations, and mechanisms that determine the rate at which one currency is exchanged for another, and which oversees the international flows of money and finance.

Interval Fund: This category of funds possesses the characteristics of both open-ended and close-ended funds.

Intrinsic Value: It is the present value of the stream of benefits expected from the asset. It is also referred to as the fair value or reasonable value or investment value.

Investment Banks: Securities firms that advise issuing entities on stock and bond offerings and that take an active role in the distribution of the securities to ultimate investors.

Issued Capital: It is that part of authorised capital of any company which has been issued (sold) to the individual and institutional investors or the buyers of the shares of the company.

J

J-curve Theory: Theory which says that a country's trade deficit will initially worsen after its currency depreciates because higher prices on foreign imports will more than offset the reduced volume of imports in the short run.

Jobbers: They are market players who provide both buy and sell quotes for particular scrips. They are also known as market makers.

Jobbing Spread: It is the same as Bid-Ask (Offer) spread i.e. difference between Bid-Ask (Offer) prices.

Junk Bond: Bonds that carry low ratings with correspondingly higher yields. The junk bond market is also referred to as the "high-yield debt market".

K

Kerb Trading: It is the unofficial (illegal) trading in securities outside the stock exchange premises during and after official trading hours.

L

Lease: A contractual arrangement whereby one party (the lessor) grants the other party (the lessee) the fight to use an asset in return for periodic rental payments.

Legal Risk: It is the risk that legal objections might be raised or regulatory framework might disallow some activities.

Lender of Last Resort: The financial institution from which other financial institutions may ultimately receive assistance during a liquidity crisis, or when they are in need for funds.

Lessor: Owner of a leased asset.

Letter of Credit: A formal document issued by a bank on behalf of a customer, stating the conditions under which the bank will honour the commitments of the customer.

Leveraged Buyout: The purchase of the common stock of a firm with borrowed funds.

Leveraged Lease: A lease arrangement under which the lessor borrows a substantial portion of the purchase price from a lender, usually a commercial bank.

Lien: A lender's claim on assets offered as security for a loan.

Line of Credit: A pre-approved credit facility (usually for one year) enabling a bank customer to borrow up to the specified maximum amount at any time during the relevant period of time.

Liquidation Value: The liquidation value is the value of the business firm which has ceased or wound up its business, or which has gone into liquidation.

Liquidity Adjustment Facility (LAF): LAF enables liquidity management on a day to day basis.

Liquidity Premium Theory: The liquidity premium theory highlights the preference for liquidity and the desire to minimise the sum of income risk and capital risk as the additional factors determining the term structure of rates.

Liquidity' Premium: (1) Additional return for investing in a security that cannot easily be turned into cash. (2) Difference between the forward interest rate and the expected spot interest rate. (3) Additional return for investing in a long-term security.

Liquidity Risk: It is a risk that unwinding of transactions might be difficult if the market is illiquid. Listed Securities: Securities which are admitted for trading on a recognised stock exchange.

Liquidity: The extent to which or the ease with which an asset may quickly be converted into cash with the least administrative and other costs.

Loan Ratio: Net Loans / Total Loans

London Inter-Bank Offer Rate (LIBOR): It is an interest rate at which banks can borrow funds in marketable size from other banks in the London interbank market.

Long Position: A position in which the investor is entitled to receive an asset in future. It is the position of a buyer of the securities.

Loss Asset: A loss asset is one where loss has been identified by the bank or internal or external auditors or by the Co-operation Department or by the Reserve Bank of India inspection but the amount has not been written off, wholly or partly.

M

Maintenance margin: The amount that is set aside to ensure that the balance in the margin account never becomes negative is called maintenance margin. It is usually lower than the initial margin. If the balance in the margin account falls below the maintenance margin, the investor receives a margin call.

Managed Float: Also known as a "dirty" float. This is a system of floating exchange rates with Central Bank intervention to reduce currency fluctuations.

Management Buyout: It is the purchase of the company by its own existing management.

Management Fee: The amount paid by mutual funds to their investment advisers.

Margin Buying: It refers to buying some shares with cash and paying for additional shares by borrowing from the stock broker. There are regulations on the limit up to which shares can be bought on the margin, and this limit is changeable from time to time.

Margin Call: A demand by authorities from the broker for additional cash or securities as a result of the actual margin declining below the maintenance margin.

Margin Trading: It is the purchase of shares by investors and brokers by using money borrowed from financiers by paying margin money.

Margin: That part of a transaction's value that a customer must pay to initiate transaction, with the other part being borrowed from the broker. There are two types of margin: initial margin and maintenance margin. In another context, margin means that part of the value of collateral security which is not given as a loan by the bank or financial institution.

Market Capitalisation: It is equal to the share price of the company at a point of time multiplied by the outstanding number of its shares at that point of time. Market capitalisation of a given stock exchange is the total market capitalisation of the scrips listed on that exchange.

Market Failure: It is a situation where scarce resources are *not* put to their highest valued uses.

Market Lot: It is a fixed minimum number in which or in multiples of which, shares or securities are bought and sold on the stock exchanges. In India, generally, for shares of face value of Rs 10, market lot is 50 to 100, while for shares of face value of ₹100, it is usually 5 or 10. Similar lot sizes are in vogue for derivatives trading. Any number of shares other than the multiples of the market lot makes an odd lot which is difficult to trade.

Market Maker: A business entity that, acting as principal, buys and sells securities. He is a professional dealer who ensures that lenders and borrowers are always able to find a counterpart for their deals. He has a key function in the secondary market. Market makers determine the securities prices, and ensure that those who want to buy and sell securities are able to do so without unduly influencing market prices. They ensure that erratic and sharp price movements do not occur, that deals on a substantial scale take place, and that transactions costs are not unduly high. They are market players who provide both buy and sell quotes for a particular scrips. They are also known as jobbers.

Market Risk: It is a risk that market price may move up or down

Market Segmentation Theory: The theory which states that interest rates on securities with different maturities are effectively determined by the conditions that prevail in the different maturity segments of the market.

Market Value: the market value of one share of stock is the current market price; for the corporation, it equals market price per share multiplied by the number of shares outstanding. In general, it is the value of a security which is determined by the market.

Mark-to-market Margin: The amount that is deposited as a further collateral to meet daily losses. This margin is required by the close of business, the following day. Any profits on the contract are credited to the client's variation margin account.

Maturity Gap Analysis (MGA): It is the simplest analytical technique for calculating IRR exposure.

Maturity risk: It arises when the term of maturity of the security happens to be longer.

Merchant Bank: An organisation that serves many needs of business enterprises such as giving advice on financial alternatives, corporate mergers, underwriting new issues, and so on.

Merger: It is a friendly or mutually agreed coming together of two or more companies to form one unit for overall increase in efficiency and profits. It can be called an amalgamation also.

Monetary Base: Claims against the Central Bank that serve as money (currency) and the reserves held by the depository institutions with themselves or with the Central Bank.

Monetary instability: It is the instability of general prices.

Monetary Union: Agreement among several nations to establish one Central Bank with the sole power to issue a single currency. The European Community's monetary union has come into effect from 1, January 1999 with European Currency Unit (ECU) or euro as a common monetary unit.

Money Market Mutual Fund: An investment company whose assets consist primarily of treasury bills,negotiable certificates of deposit, eurodollar deposits, commercial paper, and banker's acceptances.

Money Markets: Money markets deal in the short-term claims (with a period of maturity of one year or less).

Money Multiplier: The ratio of new deposits to the original increase in reserves is called the money multiplier or credit multiplier or deposit multiplier.

Money: It refers to the current medium of exchange or means of payment.

Moneyness: An option concept that refers to the potential profit or loss from the exercise of an option.

Moral hazard: It refers to the mala fide intensions of either of the parties of the contract in fulfilling their obligations with respect to their performance of the contract.

Mortgage Bond: Bond secured against physical assets such as plant and equipment.

Mortgages: Long-term liabilities collateralised by real property.

Multicurrency Clause: The clause which gives a eurocurrency borrower the right to switch from one currency to another when the loan is rolled over.

Mumbai Inter Bank Offer Rate (MIBOR): It is the interest rate at which banks can borrow funds, in marketable size, from other banks in the Indian interbank market.

Mutual Fund: A trustee company which pools the resources of like minded investors (called unit holders) for investment in a variety of instruments with the objective of giving the unit holders financial gain.

N

NBFCs-ND-SI: All NBFCs not accepting public deposits (NBFCs—ND) with an asset size of ₹100 crore and more as per the last audited balance sheet are now considered as systemically important NBFCs—ND (NBFC-ND-SI).

NBFCs-SI: NBFCs whose asset size is of ₹500 cr or more as per last audited balance sheet are considered as systemically important NBFCs.

Negotiated Deal: When a trade is executed between two member brokers and then reported on the trading system, it is called a negotiated deal.

Net Asset Value (NAV): The NA V per unit is basically arrived at by calculating the total market value of investments orassets of the MF, subtracting liabilities, and dividing by the number of units currently outstanding.

Net Asset Value Per Share: Market value of mutual fund assets less liabilities (net assets) divided by the number of shares outstanding.

Net Assets: Aggregate realisable market value of all investments less the value of liabilities outstanding for a given scheme.

$$\textbf{Net Interest Margin} = \frac{\text{Total Interest Income} - \text{Total Interest Expenses}}{\text{Average Earning Assets}}$$

Net Lease: Lease in which the lessee promises to maintain and insure the equipment.

Net Worth: Book value of a company's common stock, surplus, and retained earnings.

New Issue Market: It is the market on which a company raises capital or funds by issuing new,additional, fresh shares or debentures, or any other financial security. It is the same as primary market.

New Issue Ratio: It is the ratio of primary issues to the physical capital formation which indicates how far investment has been financed by direct issues to the savers by the investing sectors.

New Pension System: It is based on defined contributions. It will use the existing network of bank branches and post offices etc. to collect contributions.

No Load Fund: A fund with neither an entry load nor an exit load.

Nominal Yield: It represents the coupon rate of a bond.

Non-Banking Financial Company (NBFC): It is a company registered under the Companies Act, 1956 engaged in the business of loans and advances, acquisition of shares/stocks/bonds/ debentures/securities issued by Government or local authority or other marketable securities of a like nature, leasing, hire-purchase, insurance business, chit business.

Non-banking institution: It is a company and has principal business of receiving deposits under any scheme or arrangement in one lump sum or in instalments by way of contributions or in any other manner, is also a non-banking financial company (Residuary non-banking company).

Non-Competitive Bidding: Non-competitive bidding is open to individuals, HUFs, RRBs, co-operative banks, firms, companies, corporate bodies, institutions, provident funds, and trusts.

Under the scheme, eligible investors apply for a certain amount of securities in an auction without mentioning a specific price / yield. Such bidders are allotted securities at the weighted average price / yield of the auction.

Non-diversifiable Risk: The part of total risk of investment in a security which cannot be eliminated by diversification. It is also referred to as market risk or systematic risk.

Non-Performing Asset: A non-performing asset shall be a loan or an advance where the interest and/or installment of principal remain overdue for a period of more than 90 days in respect of the Loan.

Non-sterilised intervention: It occurs when the authorities purchase or sell foreign exchange, normally against their own currency, without such offsetting actions.

Nostro Account: It is the working balance in foreign currency maintained by a bank in Country A with its correspondent bank in Country B to facilitate delivery or receipt of currencies.

Note Issuance Facility (NIF): A facility provided by a syndicate of banks that allows borrowers to issue short-term notes, which are then placed by the syndicate providing the NIF. Borrowers usually have the right to sell their notes to the bank syndicate at a price that yields a pre-arranged spread over LIBOR.

Novation: It is a way of selling a loan and effectively transferring both rights and obligations. In novation, the existing loan between originator and borrower is cancelled and a new agreement between the investor and borrower is substituted.

O

Official Reserves: Holdings of gold and foreign currencies by official monetary institutions.

Offshore Finance Subsidiary: A wholly owned affiliate incorporated overseas, usually in a tax-haven country, whose function is to issue securities abroad for use in either the parent's domestic or foreign business.

Open ended Fund (OEF): When the units are sold and redeemed every day or continuously on an all-going basis at the price determined by the fund's NAV,they are called OEFs.

Open Interest: It is calculated as the number of outstanding/unsettled positions in the market as a whole at a specific point of time.

Open Market Operations: The purchase and sale of government securities by the Central Bank.

Open-ended Scheme: A scheme which gives the investor an option to subscribe to the units of the scheme at any time and have the units repurchased by the fund also at any time.

Operating Cycle: The length of time that it takes for a firm to produce its final product, sell it to customers, and collect proceeds of the sale in cash.

Operating Lease: Short-term, cancellable lease.

Operational Risk: It is defined by the Basel Committee as 'the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events'.

Opportunity Cost of Holding Cash: The rate of return that could be earned if the next best alternative to cash were held by an investor, that is, the rate of return that is forgone when an investor holds cash.

Opportunity Cost: The rate of return that can be earned on the best alternative investment. In general, the gain or return on the next best investment opportunity or the next best use of resources, which is forgone by putting the resources to a given use.

Option Contract: An agreement that confers the right to buy or sell an asset at a set price at some future date. The right is exercisable at the discretion of the option buyer.

Ordinary Shares: Ordinary shares are ownership securities which have certain advantages in favour of the issuing companies and investors depending on their attitude to risk-taking.

Overdraft System: The system in which the borrower is allowed to overdraw on his current account with the banker up to a certain specified limit during a given period.

Oversubscription: When the number or the total value of the security for which investors have applied exceeds the number or the total value of security issued by the company, oversubscription is said to have occurred.

Over-the-Counter (OTC) Market: It is a market which is not an organised exchange; it comprises a network of securities dealers who trade in financial assets; though not organised, it is officially recognised.

Overvalued Security: When the buyer or investor is willing to pay the price for the security which is not justified by its earnings per share or Price-Earning ratio, it is said to be overvalued.

P

P/E Ratio: It is a ratio of price of a share divided by earnings per share. Generally, it indicates how highly a share is valued in the market. It generally tends to be high in the case of highly rated shares. However, a high P/E ratio does not necessarily indicate a bright future for the company. A low P/E ratio where the earnings per share are high often indicates that a share in underpriced.

Paid-up Capital: It is the equity capital of the company which the shareholders have subscribed to and fully paid for.

Paper: A general term for marketable financial assets, with the implication that it is debt.

Par Value: The value of a security when it is issued. For bonds and preferred stock, par value is equivalent to face value.

Participatory Notes: They are like contract notes, and they are issued by registered FIIs to their clients/ investors outside India who do not want to go through the various regulatory processes in India which require them to make at least a minimum level of disclosure.

Pass Through Certificates: Debt instruments backed by a portfolio of assets.

Pay In: It is the process where brokers pay the clearing corporation.

Pay Out: It is the process when the clearing corporation pays the brokers.

Pay-As-You-Go Pension Plan (PAYGPP): Under this plan the current employees pay a percentage of their income to provide for the old, and, this, along with the contribution of the State, goes as a pension that sustains the older generation

Pay-Out Ratio: It is calculated as (dividend per share ÷ earnings per share) x 100.

Pension Fund: A separate entity to which periodic (or in some cases, lump-sum) contributions are made by or on behalf of covered pension plan participants. At the time of retirement, each participant receives a distribution from the fund in the form of an annuity or a lump-sum payment.

Pension Plan (PP): It is an arrangement to provide income to participants in the Plan when they retire.

Perfect Hedge: The hedge where the change in the value of the futures contracts is identical to the change in the value of the hedged asset or liability.

Perpetuity: A perpetual annuity.

Physical Delivery: It is a settlement of the contract by the supply or receipt of the asset. **Portfolio:** A set or group or combination of securities held by an investor.

Portfolio Turnover: The ratio of the lower of annual purchase and annual sale divided by the average net asset value. Indicates the trading activity of a fund's portfolio.

Position Limit: It is a restriction on the maximum number/amount of contracts that can be held by a single operator at any point of time.

Position: It is market commitment by the investor.

Preference Share: It is an ownership security like an ordinary share, but carries a fixed rate of return (dividend) like a debenture.

Preferred Stock: An equity security with an intermediate claim (between the bond-holders and the stockholders) on a firm's assets and earnings. Dividends are specified, but are not mandatory.

Premium: The difference between the face value of the security (share) and the price at which it is actually sold (issued) in the market is known as the premium.

Price-specie-flow Mechanism: An automatic balance-of-payments adjustment mechanism under the classical gold standard whereby disturbances in the price level in one country would be wholly or partly offset by the flow of I gold coins (also called specie).

Primary Dealer: A dealer in government debt with whom the Reserve Bank of India transacts business.

Primary Markets: Markets that bring surplus spending units together with deficit spending units in the process of financing productive activities. Securities are sold for the first time in primary markets.

Prime Rate: Rate at which banks lend to their most favoured or most credit-worthy customers.

Principal: Amount of debt that must be repaid. It also means a person who deals in securities on his own account and not as a broker.

Private Equity: It consists of investors and funds that make investments directly into private companies or conduct buyouts of public companies that result in a delisting of public equity. Capital for private equity is raised from retail and institutional investors, and can be used to fund new technologies, expand working capital within an owned company, make acquisitions, or to strengthen a balance sheet.

Private Placement: When an issuer makes an issue of securities to a select group of persons not exceeding 49, and which is neither a rights issue nor a public issue, it is called a private placement.

Privatisation: It means increasing the ownership, management, and control of the financial sector by individuals and private incorporated and unincorporated bodies.

Property Derivative: It is a derivative (finance) whose price and value derives from the value of a real estate asset, usually represented in the form of an index.

Prospectus: It is the document containing necessary and relevant information about the company which has to be prepared and made available when the company wants to raise fresh capital on the new issue market.

Provision for Loan Loss Ratio: $\frac{\text{Provisions for Loan Losses}}{\text{Total Loans}}$

Prudential Regulation: It means regulation without suppression, and supervision and control without constriction.

Public Deposit: Unsecured deposit obtained by a non-bank financial or non-financial company from the public at large.

Purchasing Power Parity: The concept that homogeneous goods cannot have more than one price measured in any one currency. If the price increases domestically, the domestic currency will depreciate so that the price denominated in foreign currency remains the same. This is the law of one price.

Pure Insurance Premium is the present value of the expected cost of an insurance claim.

Put Option: An option that gives its holder the right to sell an asset at a fixed price during a certain period.

Q

Quick Ratio: $\frac{\text{Quick Assets}}{\text{Current Liabilities}}$

R

Rally: It is a noticeable rise in the price(s) of share(s) or in the share market index after a period of stagnancy or a declining trend.

Real Exchange Rate: The spot rate adjusted for relative price level changes since a base period.

Real Rate of Return: The real return is equal to the nominal return adjusted for changes in prices.

Realized Yield: The return actually earned on a bond as opposed to expected or promised yield.

Realized Yield: The return actually earned on a bond as opposed to expected or promised yield.

Recourse: Term describing a type of a loan. If a loan is with recourse, the lender has a general claim against the parent company if the collateral is insufficient to repay the debt.

Redemption Price: The price per unit which the unit holder receives when the scheme is liquidated.

Refunding: The issuance of new securities to retire outstanding securities.

Registered Bond: The registered bond maintains the records of the owner and pays the interest directly to the owner.

Registered Security: Security whose ownership is recorded by the company's registrar.

Registrar and Transfer Agent: It is an entity registered with SEBI to act as an agent of the issuer of securities.

Registrar: Financial institution appointed to record issue and ownership of company securities.

Reinvestment Rate: The rate of return at which the intermediate cash inflows of a project or the proceeds of maturing fixed income securities may be reinvested.

Reinvestment Risk: The risk that it may not be possible to reinvest the proceeds of maturing fixed income securities at rates equivalent to those of the maturing securities because of generally declining interest rates.

Relative Valuation Models: In relative valuation, the value of an asset is derived from the pricing of `comparable' assets, standardized using a common variable such as earnings, cash flows, book value or revenues.

Relative Valuation Models: In relative valuation, the value of an asset is derived from the pricing of comparable assets, standardized using a common variable such as earnings, cash flows, book value or revenues.

Remat: The electronic balances in the beneficial owner's securities account maintained by the Depository are converted back into physical certificates.

Repo: Repo or ready forward contact is an instrument for borrowing funds by selling securities with an agreement to repurchase the said securities on a mutually agreed future date at an agreed price which includes interest for the funds borrowed.

Representative Office: It is a service facility provided by the parent bank to assist MNC clients of the parent bank in dealings with the bank's correspondents.

Required Rate of Return: Rate of return required by investors on their investment.

Reserve Requirement: Minimum reserve assets that by law a depository financial institution must maintain. Reserve requirements are expressed in terms of a percentage of relevant deposits.

Retail Banking: Transactions with customers of smaller means; small checking accounts, consumer credit, holding of savings deposits, or sale of certificates of deposit in small amounts to individuals.

Retained Earnings: They are that part of company's net profits after tax which is not distributed to shareholders as dividends, and which is held or kept with the company presumably for its use for the company's growth and contingency. They are also called undistributed profits or reserves.

Return on Assets (ROA): Net Income/Total Assets

Return on Equity (ROE): Net Income/Total Equity Capital

Revaluation: An increase in the spot value of a currency.

Reverse Book Building: It is a mechanism provided for capturing the sell orders on online basis from the share holders through respective Book Running Lead Managers (BRLMs) which can be used by companies intending to delist its shares through buy back process.

Reverse Repo: The reverse of the repo transaction is called 'reverse repo' which is lending of funds against buying of securities with an agreement to resell the said securities on a mutually agreed future date at an agreed price which includes interest for the funds lent. **Return:** It is the amount or rate of produce, proceeds, gain, fruit, profit which accrues to an economic agent from an undertaking or enterprise or (real/financial) investment.

Right Issue: When an issue of securities is made by an issuer to its shareholders existing as on a particular date fixed by the issuer (i.e. record date), it is called a rights issue.

Risk Adjusted Discount Rate: The discount rate applicable to a risky investment. It is equal to the risk- free rate of return plus a risk premium reflecting the risk characterising the investment.

Risk Aversion: Attitude that less risk is preferred to more risk, all other things being the same. A risk- averse investor will assume more risk only if other things are not the same, such as if he expects to earn a sufficiently higher rate of return on his investment.

Risk Premium: The additional compensation demanded by investors above the risk-free rate of return for assuming risk—the larger the risk, the larger the risk premium. Or the difference between the expected rate of return market and the risk-free rate of return.

Risk: It refers to variability of return or gain and is measured generally by standard deviation or beta coefficient.

Rolling Settlement: It is a settlement of trade or transaction in which trades executed during a day are settled on a daily basis.

Rupee Gap Ratio: $$\frac{\text{Interest rate Sensitive Assets} - \text{Interest Rate Sensitive Liabilities}}{\text{Total Assets}}$$

S

Sale Price: It is the price paid by investors at the time of investing in a mutual fund scheme.

Savings deposits: These earn interest. Although cheques can be drawn on savings accounts, the number of withdrawals and the maximum amount that might, at any time, be withdrawn from an account without previous notice are restricted.

Scrip: It is a document or certificate which shows that the holder has subscribed money to a company and which entitles him to receive dividends (return or income).

Secondary Markets: Markets in which already existing or issued or outstanding securities change hands.

Secondary Markets: Secondary markets deal in securities already issued or existing or outstanding.

Secondary Security: A financial claim issued by a financial intermediary.

Securities Lending: It occurs when a holders of securities or their agent lend eligible securities to securities traders (borrowers) in return for a fee.

Securitisation: The pooling of a group of loans with similar characteristics and the subsequent sale of interests in the resulting pool to investors

Security Market Line: The line representing the relationship between risk and return for individual and inefficient portfolios.

Self-liquidating Loan: Loan to finance current assets. The sale of the current assets provides the cash to repay the loan that is secured by highly liquid assets.

Selling Short and Buying Long: When the party which does not have (possess or hold) the assets (shares) to deliver, sells them, it is short selling. When the buyers do not have money to pay for buying the assets, it is called buying long. Thus, short is an outstanding/unsettled sold position, and long is outstanding/unsettled purchase position.

Semi-Strong Form Efficient Market Hypothesis: The semi-strong form EMH explains that shareprices fully reflect all the relevant publicly available information.

Senior Debt: Debt which, in the event of bankruptcy, must be repaid before subordinated debt receives any payment.

Serial Bonds: Bonds that mature at specified stated intervals.

Series Bond: Bond which may be issued in several series under the same indenture.

Settlement Price: Daily settlement price is the closing price of the futures contracts for the trading day and the final the final settlement price is the closing price of underlying asset on the last trading day.

Sharpe Ratio: It is a ratio of the excess return (subtracting the risk-free rate from the rate of return of a portfolio) to the standard deviation of the portfolio returns.

Short Position: A position in which the investor is obliged to deliver an asset in future. In other words, it is the position of a seller of securities.

Short Sale: The sale of a stock not owned in order to take advantage of an expected decline in the price of the stock. If the decline occurs, the stock can be purchased and the short position closed.

Short Selling: It is defined as selling a stock which the seller does not own at the time of trade. This is done when the price of the security is expected to fall and sellers believe that they could be bought back later at a lower price.

Sight Draft: Demand for immediate payment.

Simple Interest: Interest calculated only on the initial investment.

Sinking Fund: A fund to which a firm makes periodic contributions to facilitate retirement of debt.

Social regulation: It comprises regulation in the area of the environment, occupational health and safety, consumer protection and labour etc.

Soft Market: It refers to a market dominated by sellers with few buyers.

Solvency Margin: It is the amount by which the assets of an insurer exceed its liabilities, and will form part of the insurer's shareholder's funds.

Solvency Ratio: It means the ratio of the amount of available solvency margin to the amount of required solvency margin.

Sovereign Risk: The risk that the country whose currency a bank is buying or selling will impose foreign exchange regulations which will reduce or negate the value of the contract; it also refers to the risk of government default on a loan made to it or guaranteed by it.

Sovereign Wealth Fund (SWF): Sovereign Wealth Fund (SWF) is a state-owned investment fund composed of financial assets such as stocks, bonds, real estate, or other financial instruments funded by foreign exchange assets.

Special Drawing Rights (SDR): A new form of international reserve asset created by the IMF in 1967, whose value is based on a portfolio of widely used currencies.

Speculation: When the investor trades on the basis of anticipated or expected price changes of the asset, he is said to be practising speculation.

Spot Rate: Exchange rate which applies to 'on the spot' delivery of the currency—in practice it means delivery in two days after the day of trade.

Stagflation: Inflation that occurs simultaneously with stagnant economic growth (recession).

Stags: Stags are those who do not generally invest in the secondary market, they prefer to invest in primary markets.

Standby Agreement: In a rights issue, agreement that the underwriter will purchase any stock that is not purchased by the stock-holders.

Statutory Liquidity Ratio: It is the percentage of total deposits banks have to invest in government bonds and other approved securities.

Sterilised Intervention: Foreign exchange market intervention in which the monetary authorities insulate their domestic money supplies from the foreign exchange transactions with offsetting sales or purchases of domestic assets.

Stock Derivative: It is a derivative whose underlying is a share of some company.

Stock Dividend: A payment of dividend by the corporation in the form of ordinary shares rather than in cash.

Stock Index Futures: Futures contracts on stock indices.

Stock Index Options: Option contracts on stock market indices such as SENSEX.

Stock Split: A given' share of given face value is exchanged for more than one share with the result that the face value of a new share will be lower than that of the earlier one.

Stock: It can be defined as instrument of ownership of particular assets which are issued by the company.

Stress Testing: It provides an estimate of the change in the value of the portfolio due to a sudden change in the risk factors such as interest rates and exchange rates.

Strong Form Efficient Market Hypothesis: Strong form EMH assumes that the stock price fully reflect all information from public and private sources.

Structural Regulation: It concerns the regulation of the market structure.

Subordinated Debt (junior debt): Debt over which senior debt takes priority. In the event of bank-ruptcy, subordinated debt-holders receive payment only after senior debt is paid off in full.

Subsidiary and Affiliate Bank: A subsidiary bank is a locally incorporated bank i.e. either wholly owned or owned in major part by a foreign parent bank.

Sub-Standard Asset: An asset of a bank would be classified as sub-standard if it remained NPA for a period less than or equal to 12 months.

Sum Assured: Itis the amount that is promised by the insurance company in case of a claim either by maturity or by loss to the insured subject matter.

Sunk Costs: Costs which have been incurred and cannot be reversed or recovered.

Surplus Spending Unit: An economic entity whose income in a given period exceeds its expenditures. Swap Contract: An agreement between two parties (counterparties) to exchange assets or a series of cash flows for a specified period of time at predetermined intervals.

Swap: Swaps are agreements between two parties to exchange assets or sets of financial obligations or a series of cash flows for a specified period of time at predetermined intervals.

Switch: It is a mechanism by virtue of which investors can shift their investments from one scheme to others within that fund.

Syndicate: Group of banks and financial institutions which together contribute the necessary financing for a transaction.

Synthetic Position: It is the position created to generate desired payoffs by operating in different products/markets simultaneously.

Systematic Investment Pan: It is an investment tool offered by mutual funds which helps investors to make a regular investment of small amount for a certain period of time.

Systematic Risk: The variability in a security's total return that is directly associated with the overall movements in the general market or economy is called systematic risk.

T

Tangible Assets: Physical assets such as plant, machinery, factories, and offices.

Tap System: The system by which the government sells only those securities that the public requests.

Tax Haven: A nation with a moderate level of taxation and/or liberal tax incentives for undertaking specific activities such as exporting.

Technical Analysis: It is a technique or method of predicting security price movements based on a study of price graphs or curves or charts over a period of time.

Temporary Investments Ratio: $\frac{\text{Govt. securities sold + Investment securities with maturities of one year or less + Due from banks}}{\text{Total Loans}}$

Tender Offer: General offer made directly to a firm's shareholders to buy their stock.

Term Deposits: These are also known as fixed deposits or time deposits and they are the genuine saving medium. They have different maturity periods on which depends the rate of interest.

Term Loan: A loan which is generally repayable in more than one year.

Term Structure of Interest Rates: The relationship between the length of maturity of loans and interest rates on them.

Term to Maturity: The term to maturity specifies the date or the number of years a bond matures.

Terminal Value: The terminal value of the asset or money is the value of today's money at some point of time in future.

Terms of Trade: The weighted average of a nation's export prices relative to its import prices. Thin Market: The market in which there are few buyers and sellers for a security.

Tick Size: The minimum amount by which the price quoted on the cash market change, and which is decided by the stock exchange in the case of derivatives trading.

Time Bill: On the other hand, is payable at a specified later date.

Time Draft: A document which would demand payment at a stated future date.

Total Rate of Return Swap: It is a contract between two counter parties, whereby they swap periodic payments for the period of the contract.

Trade Acceptance: Written demand that has been accepted by an industrial company to pay a given sum at a future date.

Trade Day: It is a transaction date on which the investor has bought or sold the security in the market. Trading Cycle: It is a period as notified by the Exchange during which the contract will be available for trading.

Trading Limit: It is the maximum number of contracts that a operator can trade in a single day.

Transfer Agent: Individual or institution appointed by a company to look after the transfer of newly issued securities.

Treasury Bill Rate: Treasury bill rate is the rate of interest at which treasury bills are sold by the RBI.

Treasury Bill: Treasury bill is a particular kind of finance bill or a promissory note put out by the government of the country. Treasury bills (T-bills) offer short-term investment opportunities, generally up to one year.

Treasury Stock: Common stock that has been repurchased by the company and held in the company's treasury.

Treynor Index: Ratio of risk premium to the beta of the portfolio. Measures the risk premium per unit of undiversifiable risk.

Turnover Ratio: It is measured as the total value of shares traded on a country's stock exchange divided by stock market capitalization, and it is a commonly used measure of trading activity or liquidity in the stock markets.

Two-tier Foreign Exchange Market: The arrangement which involves an official market (at the official rate) for certain transactions and a free market for remaining transactions at market-determined exchange rate.

U

Underlying Asset: It is a value of the asset like shares, debentures, commodity, livestock or some price index on which derivative contract is based.

Underpricing: Issue of securities below their market value.

Underwriting: The arrangement in which investment bankers undertake to ensure the full success of the issue of securities.

Unfunded Pension Plan (UPP). If the fulfillment of the promised benefits by the sponsordepends on the general credit and not by any specific contribution to be made year after year, it is calledan UPP.

Universal Bank: A bank or financial institution that has the legal authority to offer all financial services and may, thus, be engaged in securities dealing, insurance, underwriting, and the full range of more traditional banking services.

Unseasoned Issue: Issue of a security for which there is no existing market.

Unsystematic Risk: Also called non market risk or diversifiable risk. It is the risk attributable to factors unique to the security. It is also referred to as unique risk, specific risk, and residual risk.

V

Value Additivity: Rule that the value of the whole equals the sum of the values of the parts.

Value Traded Ratio: It is measured as the total value of domestic stocks traded on domestic exchanges as a share of GDP. This ratio measures trading relative to the size of the economy.

Value-at-Risk (VaR): Value- at-risk indicates the potential loss of a position/asset over a period of time with a given level of confidence.

Vanilla Derivatives: They are those derivatives which are standardised as specified by exchanges and have simple standard features. They are also known as "plain vanilla" derivatives.

Volatility Liability Dependency Ratio: $\frac{\text{Total Volatile Liabilities} - \text{Temporary Investments}}{\text{Net loans and leases}}$

Volatility: Fluctuations in a security's or portfolio's return or price. It refers to wide changes in the price.

Vostro Accounts: Accounts of foreign banks or other foreign correspondents having rupee (foreign currency) deposit balances with domestic banks/financial institutions.

W

Warrant: A corporate-created option to purchase a stated number of common shares at a specified price within a specified time (typically several years).

Weak-Form Efficient Market Hypothesis: The weak form EMH assumes that the share prices fully reflect all security market information contained in past price movements, which includes rates of return, trading volume, other market-generated information, block trades etc.

When-Issued Market: It is the market where trading takes place in that bond before the issuer sells the securities in the primary market. A when-issued market is very active in government bonds in the US. It is started in India in the government securities market in 2006.

Y

Yield: The total of all dividends for last one year as a percentage of the month-end offer price in the case of an open-ended scheme and as a percentage of the market price in the case of a close-ended scheme.

Yield Spreads: The relationships between bond yields and the particular features of bonds such as quality, callability, and taxes.

Yield to Call: A better measure than yield to maturity for bonds likely to be called back, using as the time element the end of the deferred call period rather than the term to maturity.

Yield Curve: The yield curve is a line that shows the relationship between yield to maturity and time to maturity for bonds of the same asset class and credit quality.

Yield to Maturity (YTM): The average annual rate of return to a bond investor who buys a bond today and holds it until it matures. The YTM is that rate of return that causes the market price to equal exactly the present value of the future cash flows (interest payments and maturity value).

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