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-Roshan F. Padamadan

CEO & CIO, Luminance Management



Time-Tested Secrets To Stress-Free Investing

V.R. MEENAKSHI SUNDARAM



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То

My Parents, Gurus, Archana, Vasanthi, and Thillai

Preface

This book has been written exclusively for the common women and men on the street – The Retail Investors, who work in the offices, factories, hospitals, oil rigs and other workplaces during market hours. When I set out to write this book, I had ONLY ONE objective in mind for this book to accomplish. By following the ideas presented in this book, a retail investor with regular employment must be able to earn decent investment returns without losing any sleep. To accomplish this, the book must be simple and easy to read; the techniques must be easily learnt and applied; the methodology must be safe to follow and must work consistently forever. The ideas should have no expiry date; what works today should work for a thousand years hence and beyond. It is written from a global perspective to reach out to every one of the retail investors in the world. The language and examples used in this book are simple and easy to understand even for the beginners.

Many times, these investors enter into the markets thinking that they have all the required skills. In reality, they have no edge at all over the millions of traders and professionals who spend enormous amount of time, effort and computing power to earn a living from the markets. So, without realizing whom they are up against, these retail investors go about their business of investing, only to lose their hard-earned money in the markets.

It is not good enough to get a few initial small successes. The initial success may actually be the 'trap' that entices a novice investor to stake bigger money in the market and encourages complacency on the part of the investor, which eventually leads to huge losses. The initial few small successes can at best be called as curse, because they provide justification to the wrong methods, culminating into bad habits. Once a wrong method becomes a habit, as with all habits, it is extremely difficult to eliminate the same from our system. So, if you have been losing money after a few initial gains, tell yourself that you will need to unlearn your habits first.

I have had the same curse that made me gain a few times initially only to start losing later. When I talked to some of my colleagues and friends, I realized that most of them essentially have made similar loss making patterns. The impact of these losses made me realize that something was amiss. I knew for sure there are many people who make a decent living on stock investments alone and I wanted to find out how. One led to another and before I knew, I enrolled myself into the CFA program. Naïve that I was, I could not have chosen a more difficult course to study. Having spent six years in college, studying Mathematics and Engineering, I had never imagined that sitting for exams could be this difficult. With no possibility of failure, I endured the stress and pressures of studying and passed all the three CFA levels. Then while working as a Trading Representative of a Stock Broking Company, I started to see the same familiar losing patterns in my clients' trades also. Most of my clients are ordinary people with regular employment with very little time to do research on stocks. Nevertheless they traded stocks raking up consistent losses. This prompted me to conduct classes on stock investment to my clients. Along the way came another thought suggesting that there must be many millions of people in the world who, like me, my friends and now my clients, may be losing billions of dollars of their hard earned money in the market. This book came as a result of that thought.

During my research while writing this book, I came across several facts about retail investing that gave me further motivation to continue writing this book. Along the way, it occurred to me that the common people who are losing money investing in the financial markets are not in the minority; they actually form a *super-majority*.

- 1. In Singapore, Central Provident Fund is a compulsory scheme to enable employees to save for their retirement and fund their housing. One of the components of the CPF funds is CPF-Ordinary Account, which can be also used for investment purposes. According to a research¹ conducted in 2007, 48% of the CPFIS-OA investors incurred losses; about a third of the investors made profits equal or less than the default interest rate of 2.5%. Only 20% of the investors made profits in excess of the default interest rates. *The period under observation is the bull years of the financial markets between 2004 and 2006. It means 80% of the investors had realized returns of less than or equal to 2.5% while the Singapore Stock Index itself was up by 69% during those 3 years.*
- 2. Investing in IPO stocks has been a common avenue for people to engage in speculation in stock market. As per the recent statement (in Feb 2012) made by China Securities Regulatory Commission (CSRC), investors who buy shares on the first day of trading, eager for short-term returns, help fuel speculative investments and disrupt share prices. Roughly 94.7% of new-share speculators made a loss [China Daily]. More than 90% of the people losing money is not something one can ignore.
- 3. More and more companies are turning to Defined Contribution (DC) plan for the retirement benefit of their employees. This means instead of paying pensions, many companies now opt to make fixed contributions to their employees' pension funds leaving the employees entirely responsible for the outcome of the pension funds, and therefore their retirement lifestyle. Under the DC plan, the risk of underperformance of the pension funds lies squarely with employees. In contrast, under Defined Benefit Pension scheme companies are obligated to pay pensions to their employees. Any shortfall in the pension fund becomes the liability of the company. Companies, as

professional entities, manage the pension funds in a professional manner by hiring competent fund managers. Individuals with their behavior biases, lack of skills, time and inclination are severely hampered to maintain similar professional levels when they approach investing. Despite these difficulties, more and more employees find themselves to be 'fund managers' of their own retirement accounts, which increases the urgency of investor education.

If you are one of those millions who seem to be always at the losing end to the market, then this book has been written especially for you. If you had a technique that made you some initial gains and many huge losses, then you must accept that your technique is faulty and it is not doing you any good. It is almost certain that you have gotten yourself into a pattern that is quite difficult to extricate yourself from. The strange thing about this pattern is, as you become more and more prosperous (from your employment income) the trading losses become bigger and bigger, making sound sleep impossible.

I have worked more than a couple of decades as a control system engineer; part of my responsibility is to design process control and safety systems for offshore oil & gas installations. My primary guiding principle in those years had been 'many people working in this installation could be sole bread winners for their families; whatever I do must not put their lives in jeopardy and I will not cut corners with safety'. I applied this very principle consciously on every difficult decision made; especially the ones that involved cost cutting. Now, I am amazed to observe, that the principle of safety in the engineered systems are very much applicable in investing, although additional safety measures in investing doesn't cost you more money. While risks are very different between oil & gas installations and stock markets, the risk reduction principles are not vastly different.

I am well aware of the difficulties working people would have in doing research to uncover good investments; they are skills, time and inclination to spend time to do research. In this book, I have addressed the first two factors namely skills and time to do research adequately. I am particularly very sensitive to the issue of 'lack of time' for retail investors and therefore covered only the most important issues to make the research faster. However if your problem is 'lack of inclination' to spend time on your investments, then this book will not offer much help to you. It would be wise to approach a financial advisor for assistance. I caution you most emphatically not to take up investments by yourself, because lack of adequate research in investment is equivalent to speculation.

I can promise you that this book will provide you the practical steps and techniques with which you may put an end to your loss making patterns and guide you step-by-step to develop your own strategy for a long-term investing success. This book will also help you build your own 'tool-box' of financial spreadsheets by providing step-by-step instructions with corresponding formulae. I have carefully chosen only the necessary minimum steps that can be easily understood and used by common working class people. What you need to give in return is your open mind to new ideas and your ability to overcome your inertia by participating fully to do all the exercises that come your way while reading this book. Keep a pencil handy to write remarks and to underline sentences that impress you most.

This book is not merely for your reading pleasure at bedtime to induce sleep although ironically the book is supposed to help you to sleep peacefully after making your investment decisions. By taking wise investment actions in full alertness, may you make your investments without losing sleep and this book will empower you with all the techniques and strategies required to this end.

V.R. MEENAKSHI SUNDARAM

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1. Why Invest?

(Setting Goals)

A goal properly set is halfway reached.

Abraham Lincoln

1. We are all Investors

Unless we keep the dollars we receive as salary under the pillow, we undertake some form of investing. If our salaries are deposited directly into the bank accounts, the dollars in our accounts attract interest. The savings interest thus accrued does not amount to anything these days; nevertheless the simple act of leaving your money in the bank is called investing. Have you ever wondered why banks must pay you interests on your deposits? If you think they are doing you a service, think again. The simple act of depositing your money in the bank renders you a 'lender' and the bank the 'borrower'. You are actually a cheap money source for the banks. The money borrowed thus (from the depositors) will be lent to people, businesses etc, at higher interest rates than paid to the depositors. The interest spread, the difference between the borrowing and lending rates, constitutes the major portion of a bank's profit.

Perhaps, we do not consider bank deposits as investing because the returns from them are pitifully low. At the time of writing this book it was less than 1% in most developed countries. In many developing countries, where the bank interest rates are more than 5%, the bulk of the returns are lost to the high inflation. Thus, leaving the money in the bank almost always results in subnormal returns that are inadequate to protect the purchasing power of the money.

However, there are also some benefits that come with bank deposits. First one is 'lower risk' to your capital. This is because the bank deposits (up to a certain limit) are protected by deposit insurances. So, even if the bank becomes insolvent, you will suffer no losses (up to the insured amount) on your deposits. The money in the bank, therefore gives one a strong sense of security. The second one is also significant, because this involves the individual investor's personality. Leaving the money in the bank keeps us free from the need to think and to make complex investment decisions. It is for this same reason most people shudder at the thought of having to make changes to the fund allocations in their retirement (e.g. 401 K in the US) accounts.

You might ask 'if I am a lender then why must I stand in a bank's queue?' This is because, firstly you don't realize that you are a lender yourself and secondly the banks have too many folks like you to lend them with cheap money!

S Call for Action

Find out from your bank the terms of the deposit insurance. If you had more money in a single bank than covered by the insurance, then it is wise to keep smaller amounts in a few banks so that all your deposits are adequately protected by the insurance. 'Don't put all the eggs in one basket'.

2. Inflation

It would appear that leaving the money in a bank is perfect from the 'safety of principal' point of view. However, it is only an appearance; the reality can be very different. Having deposited USD 2000 in a fixed deposit in 2002 I had received USD 2210 after 10 years, a mere 1% yearly return to show for the unwavering loyalty and support to the bank. In the mean time, costs have risen through the roof. With the capital of USD 2000, ten tons of rice could have been bought in 2002, whereas only four tons could be bought in 2012. This represents a 60% drop in the purchasing power of money during the last 10 years.

The commodities such as the food grains, energy and metals have all seen spectacular price increases in the last decade. The world economy as a whole experienced one of the strongest periods of growth, particularly during the period, between 2003 and 2008 that resulted in commodity prices spiraling out of control in 2008. The crude oil prices have shot up from USD 30 a barrel to over USD 130 a barrel during these six years. At the peak of the bull-run in May 2008, a ton of rice sold for more than USD 1000, a whopping five times (from USD 200 a ton to USD 1000 a ton) in 6 years! But then the US subprime crisis threw the spanner in the works and we were all spared the prospects of seeing the crude oil at USD 200 a barrel at the end of 2008, as some analysts had predicted.

The phenomenon described above is known as inflation. The Consumer Price Index (CPI) is the most widely used inflation indicator in an economy. Consumer Price Index is the average price of a fixed basket of over 200 goods and services purchased by the consumers. It is also used in employment contracts as a basis for wage adjustments and labor union agreements. Consumer Price Index is a publicly available data, which is reported by most governments on a monthly basis. For example, the data on US inflation is available at the US Department of Labor, Bureau of Labor Statistics website at: http://stats.bls.gov/cpi/

With this background, we will now introduce 'Money Illusion', a concept in Behavior Finance that accounts for the behavior of investors who are satisfied with the nominal value of the money without bothering about its diminishing purchasing power. Receiving a bank interest of 1% with an inflation of 2% appears to be not much different from a higher interest of 8% with 9% inflation. You will end up poorer in both cases even though receiving 8% interest appeals to us. However, in reality, receiving 8% interest is worse than 1%, because bank

interests are almost always taxable. When you consider after-tax, after-inflation effects, 1% interest is actually better.

So, when we evaluate investment opportunities, we must always consider both inflation and taxes. What we are really interested in is the real returns to enhance the purchasing power of the money. We will not be able to achieve that by relying on bank interests.

3. Deflation

In some periods, the inflation could be as large as described above; in other periods it could be much less; but in some other rare periods there could be even negative inflation, commonly known as deflation, which is our focus in this section. During deflationary periods, the prices actually drop thereby increasing the purchasing power of the money. If inflation is bad for our savings, then one may be quick to point out deflation should be good. Then why don't central banks around the world engineer their economies towards deflation rather than inflation? The reason is simple and can be easily explained. In a deflationary environment, the current prices are lower than that in the previous year. This is great for your purse, of course, as it lets you save your money.

However, what if you know that the prices next year would be lower than the current prices? You would simply postpone all non-essential spending to next year in the hope of saving more money. This means lower sales and profit margins for the companies; leading to hiring freeze, wage freeze, layoffs etc. Weaker companies will go out of business. Eventually, wage earners will find their disposable income falling. In order to entice buying, the surviving companies must reduce prices further, thus forming a vicious circle.

Drop in business volume will result in lower tax revenue to local and central governments. With ever increasing size and structure of governments, declining tax revenue would not be tolerated for long. Furthermore, people who worked in those failed businesses must be paid unemployment benefits or other means of support. Thus, the liabilities of the governments will actually increase when they are least prepared for them. For those who lost their jobs due to deflation, ability to save a few bucks (due to deflation) is a small consolation. They would rather have their jobs and welcome inflation with both hands than to lose their jobs and save some small change. Deflation therefore is 'lose–lose' to all.

It is now widely accepted that the 'controlled inflation' is far better than deflation and the central banks around the world will fight with vengeance any deflationary pressure using all the tools available at their disposal. In fact, price stability is one of the major goals of most central banks implying *low* inflation, not *no* inflation. Therefore, in general, chances of having inflation are much higher than deflation. There are exceptions of course; Japan has been in a deflationary environment for several years during the past two decades; but then it is an exception, not a norm.

In my view, political constraints, rather than a lack of policy instruments, explain why its deflation has persisted for as long as it has.¹

Ben S. Bernanke

Chairman of the US Federal Reserve

By the way, the human spirit is one that longs forever for expansion even as our universe is expanding. The fact that 'our universe is not static and that it is continuously expanding' was first discovered by Edwin Hubble. Since the universe in which we live is expanding, it is a small wonder that none of us enjoy living in a deflationary environment!

4. Why Set Financial Goals?

From our discussions in the previous topics, we can safely conclude that the interest from the bank deposits cannot beat the effects of inflation. So, even to maintain the purchasing power of your money, you must look at other investment avenues. For most people, the real reason for investment is to grow their money to fulfill a particular obligation in the future, which is much more than merely maintaining the purchasing power. This reason is the driving force that provides the required motivation to undertake an investment action.

Like everything in life, setting goals and striving to achieve them give the entire process of investing a professional touch. Why should investing be approached in a different way? When you set your goals, you concentrate not only on what you want to achieve but also focus on the consequences of not achieving them including the consequences of losing a part or full capital. Too often you will find people undertaking investments with a reason such as 'to make more money'. When you operate with such a vague goal, you will never know how much *more money* will make you happy. Moreover, you will have no idea about the consequences of not achieving, since you did not set any benchmark in the first place. Not having a well defined goal is like sailing a ship without the compass; sooner or later it will sink!

We will now take a look at some of the most common purposes for undertaking investment actions.

- \Box to protect the purchasing power of the savings,
- □ to make a million dollars in stock trading,
- □ to help build savings for retirement (e.g., 401 K),
- \Box to pay for the higher education of our children,
- □ to provide an income stream during retirement,
- $\hfill\square$ to accumulate a sum for the down payment for buying a house,
- □ to go on a world tour,
- $\hfill\square$ to leave money for a foundation,
- □ to leave money for gifts and charities.

So, take a few minutes and think about your purpose for investing and write it down clearly. When you think about your purpose, you will also know your time horizon and your current state of finances. You could have several investment goals at any given time e.g., one goal could be for 1-3 years from now; another could be for 5-7 years from now; and yet another could be for 20 years from now; and so on.

5. Template of a Financial Goal

Assume you have savings of USD 45,000 now and your purpose is to pay USD 75,000 for the down payment for your home in 3 years. You will be able to top-up USD 5,000 every year. The foregoing statement typically expresses the basic requirements of a goal.

Right at the time of setting the goal, *not later*, you must contemplate the consequences of not meeting the objective. Moreover you must also think about the consequences of losing a part or most of your investment. The consequences can be both material and emotional and it would be profitable to consider them when you formulate your goal. When you work on your goals, do not worry about how you are going to make them happen. Just set the goals first and move on. A template has been provided to help with formulating a financial goal.

Purpose	To be able to pay USD 75,000.00 in 3 years time for the down payment for a new home. The current savings is USD 45,000.00 and will be able to contribute USD 5,000.00 more every year
Consequences of not reaching the target (no loss of capital)	Material: Will be able to make-up for the shortfall from the savings for the children's education or from the savings for the retirement Emotional: Nil
Consequences of losing a big part or most of the investment	Material: The purchase of the new home may have to be postponed and all un- necessary expenses will need to be cut to begin rebuild capital Emotional: Need to reduce expenses involves life-style changes
Date of Investment Action	The date when you intend to take invest- ment action and it should not be today's date.
Date when the goal must be achieved	In this example it is the date when you intend to make the down payment for your new home, 3 years later
Initial Investment (PV)	USD 45,000.00
Target amount (FV)	USD 75,000.00
Investment duration in number of months or years (N)	3 years

Table 1.1	Template of a Financial Goal
-----------	------------------------------

Additional investment contribution, monthly or yearly (PMT)	USD 5,000.00 per year
Expected Annual Inflation (%)	3%
Required Return	Calculated result (see Chapter-2, Section-8a)

6. Sample Financial Goals

A few sample financial goals have been provided in this section in order to give you a head start in setting your own goals.

a. Medium Term Goal

Assume you expect to pay around USD 100,000 for the college education for your two children in about 7 years time; you have USD 20,000 now and you will be contributing USD 7000 per year over the next 7 years. This is a typical medium term goal. It is possible that the college education in your country may be almost free (fully subsidized by your government); in this case this goal may not even be applicable to you. Work on only the goals that are relevant to your own circumstances.

b. Long Term Goal-investing for retirement

Assume that you have saved USD 200,000 thus far and you have decided that your spouse and you would require USD 1,200,000 in 20 years when you intend to retire. You are able to contribute USD 24,000 per year to your retirement fund. Planning for the retirement is a classic example of a long-term goal. The subject of retirement demands a greater attention as it affects all of us financially as well as emotionally so this has been covered in great detail in later sections.

c. Long Term Goal-during retirement

Assume that you have a savings of USD 800,000 at retirement; your spouse and you expect to live for another 25 years. You do not expect any support from your children. You intend to leave a sum of USD 100,000 to your children and a sum of USD 50,000 for your favorite charity organization when both of you pass away. To maintain your current lifestyle throughout your retirement, your annual expense would be USD 50,000, which will increase with inflation.

d. A list of questions has been provided below to help you with developing your financial goals.

- 1. If the investment targets could not be met, will you be able to reduce your life style?
- 2. How will you feel emotionally about the prospect of not leaving anything to your children or your favorite charities?
- 3. What if the investment losses force you to go back to work? Will you be able to find a suitable employment? Even then, do you have any health issues?

- 4. 'You expect to live for 25 years' is an assumption. What if both or either of you lived longer? Longevity risk!
- 5. 'The expense increasing with inflation' is also an assumption. What about unexpected medical expenses for older patients, which may increase much faster than the inflation.
- 6. Inflation has been assumed as a fixed number during the entire investment horizon, which may not be so.

For your specific situation, you may have made many other similar assumptions in your own goal statement. Each of those assumptions has a probability of not materializing and all of these will collectively affect the expected results in a way that cannot be easily forecasted. So, you will need to be conservative while setting your goals at the outset.

7. Setting Your Own Financial Goals

As this book is written for people who take prompt action, I strongly urge you to stop reading the book; go to a quiet place and work on a financial goal. If the investment will affect another person, say your spouse, then it is wise to involve him/her at this time. A blank template has been provided for this purpose. You may take copies of the template and use for many of your financial goals.

Purpose	
Consequences of not reaching the target (no loss of capital)	Material:
	Emotional:
Consequences of losing a big part or most of the investment	Material:
	Emotional:
Date of Investment Action	
Date when the goal must be achieved	
Initial Investment (PV)	
Target amount (FV)	
Investment duration in number of months or years (N)	
Additional investment contribution, monthly or yearly (PMT)	
Expected Annual Inflation (%)	
Required Return	

 Table 1.2
 Blank Template of a Financial Goal

When you have finished, you will be astonished to realize how much clarity you would have gained on your investment goals. With practice comes perfection; you can establish more number of financial goals as necessary with confidence. Do not underestimate the importance of 'thinking of the consequences' part before taking investment actions. If you do not think of it before the investment, then you will be forced to think about it when there is an actual loss; and this may lead to making irrational decisions taken purely based on your emotions.

Many of the people I know could finish a financial goal within 15 minutes; some of them in less than 5 minutes and they are ready to make the investment decision in the next 5 minutes. The speed with which they approach investment is as if they had wasted so many opportunities in the past and they won't let another go by. I suggest that you leave the goal for a day or two and review it again; you will be surprised that there is still something to revise. Try to involve at least another person, say your spouse, when you are doing the review.

There is a reason why such a delayed process is preferred and the reason can be very easily explained. The institutional investors like banks, insurance companies and fund management companies do not make investment actions as soon as the investment goals are finalized. They have to put forth the investment plans for a committee's approval and only after a thorough deliberation and a possible voting can they undertake any investment action. So, why not try to emulate the 'big boys' and give a professional touch to the whole process of retail investing.

8. The First Act—Retirement Planning

The last thing human beings want for them is to live poor during their golden years. It is hard to improve the situation from then on; things can only get worse. If you are reading this book when you are brand new in the workforce (less than 30 years of age), consider yourself very fortunate. As a new person in the workforce, you might expect to continue working for the next 30–35 years till your retirement. You must indeed be lucky to be in a position to plan so far ahead, to design your financial destiny at such a young age. This is so, even if you do not possess significant savings at present and whatever you earn seem to disappear by the month-end.

Most people do not consider financial planning for their retirement until they approach the 40-year mark, when the aches and pains of the body remind them of the reality. No one really thinks of retirement at the time of entering the workforce, although almost all of us know we must retire one day.

I am usually reminded of a story in the Great Indian Epic Mahabharata, the King Yudhishtir, when asked what was the greatest wonder in the world replies thus 'Day after day, hour after hour, people die and corpses get carried along the streets, yet the onlookers never realize that they must also die one day, but think and behave as if they will live forever. This is the greatest wonder of the world.'

What once appeared a distant prospect is no longer so when you hit mid 40s. You would then have less than a couple of decades to work if you are reasonably healthy. The prospect of retirement can deal a rude shock for the unprepared. I am not even considering at this stage, the possibility of losing job at the prime of one's career and that is yet another possibility one must think about.

More and more companies and governments are moving away from offering pension benefits to their employees². Instead they just contribute fixed amounts to their employees' retirement accounts (Defined Contribution—DC Plans) e.g., 401 K accounts in the US. Under the DC plan, employees manage their retirement accounts themselves and therefore bear the risk of underperformance. It means that the employees are now fully responsible to make sure that the contributions and the returns thereof are sufficient to ensure a comfortable retirement lifestyle.

On the other hand, under the (Defined Benefit—DB Plans) pension scheme, the employers are responsible to pay pension benefits to their retired employees. The employers, thus bear the risk of underperformance of the (employees') pension funds. Even when the pension funds suffer serious losses, the employers must still honor the pension (defined benefit) commitments to the pensioners. Employers, being corporations, take a professional approach in dealing with pension funds, by hiring qualified fund managers with required skills to manage the funds in a professional manner.

Individuals, with lack of skills, time, inclination, and behavior biases, are severely handicapped to maintain similar professional levels in managing their own retirement accounts. In spite of this, more and more employees are becoming the 'fund managers' of their own retirement accounts, which increases the urgency of investor education. This is one of the major reasons why this book has been specifically written for the working people.

If your job comes with a government pension then you are probably much better off. Even then you cannot be sure that your government can fulfill its obligations when they are due. As of writing this, Greek parliament has just approved salary and pension cuts for public sector workers.

It is dramatic to cut someone's pensions . . . But why do we have to take these measures? Because our budget is still running at a loss.³

Evangelos Venizelos

Greece Finance Minister

It may be a dramatic move by the Greece parliament in this instance; nevertheless it is real. This means retirement lifestyle of the affected people has just been put in jeopardy. Having a secure job with pension benefits is NO excuse for not planning for your retirement.

If you are already closer to retirement, then also you must do financial planning to maintain your desired lifestyle during the golden years. In fact, with ever improving field of medicine, the longevity has increased to a point it can easily pose a risk of outliving one's retirement savings. Insurance industry calls this risk as *longevity risk*. This is a real problem one must consider, which was not there half a century ago when life expectancy used to be far lower.

So, regardless of which age group you are in presently, you can put in a conscious effort to plan for your retirement. Since the retirement planning is the single most important issue confronting most working class people, why don't you make it as your first act?

To Summarize...

- 1. Leaving money in the bank is also investing, albeit with pitifully low returns.
- 2. Bank deposits are protected by deposit insurance up to a certain amount. So, the perceived risk is very low.
- 3. Inflation must be considered for evaluating investment returns. What really matters is the inflation-adjusted return.
- 4. Don't forget the effects of taxes; your after-tax returns must beat the inflation to maintain your purchasing power.
- 5. Deflationary pressures will be fought with vigor by central governments. Therefore, in general, chances of having inflation are much higher than deflation.
- 6. Well defined goals must be set before undertaking any investment actions.
- 7. It is important to think and write down the material and emotional consequences of *not meeting* your investment targets in your goal statement.
- 8. Similarly, it is also important to think and write down the material and emotional consequences of *losing a part or the whole* of your investment amount.
- 9. However, if you could not really come up with a reasonable reason for investing, then I most emphatically suggest you to take a bold decision of not venturing to invest at all. Remember, 'to make more money' is NOT a good enough reason to invest! You may simply choose to leave your money in bank fixed deposits. You may also choose to invest in risk-free government bonds, if you are absolutely sure of keeping the bonds to maturity. (Even risk-free government bonds have risks related to interest rates; if you keep them till maturity, then it should not matter). You may put this book aside now or may complete it for academic purposes and resolve not to take any action. You may still consider investing at another time though. Reading this book up to this point would have been worthwhile, if it has at least served you to take one of the most important decisions of your life.

2. Investment, Risk and Returns (The 3 Pillars)

An Investment Operation is one which, upon thorough analysis promises safety of principal and an adequate return. Operations not meeting these requirements are speculative.

Benjamin Graham and David Dodd

Security Analysis¹

1. What is Investment and What it is not?

Investment is an operation that takes the capital away for a period of time with a promise or hope of a suitable compensation (returns) with an assurance or hope for the safe return of the initial capital. The certainty we must face as retail investors is the lack of control over the capital in exchange for a return. If you are able to exercise control over your investment capital, then you are more like a business owner, not a retail investor. So, from the perspective of a retail investor, the absolute *certainty* is with respect to the quantum of the capital (principal) and loss of control. The *uncertainty* on the other hand is with respect to the return of the principal, timing and a suitable compensation (investment returns) for undertaking the investment. The word 'risk' is used to collectively represent all the uncertainties.

Now, let us focus our attention on the above definition by Benjamin Graham, who is famously known as the Father of Value Investing. Graham did not use the word 'risk' in his definition; instead he chose to include 'thorough analysis' and 'safety of principal'. It had been a revolutionary concept to investing half a century ago and it is still relevant today. As per Mr. Graham's definition, if an operation was conducted without proper analysis, then it would be deemed as speculative. Even a defaulting bond can be a safe investment if it was bought at sufficiently steep discounts by an investor who knows (after thorough analysis) the underlying assets well. On the other hand, buying stock of a great company at sky-high prices can be speculative if the investor does not know the risk-reward characteristics well. So, the key that separates a speculation and an investment is the presence of a 'thorough analysis'.

We will need to deal with the subject of speculation in the same breath as investment because of the close proximity between the two. It is true that there is an element of speculation in almost all investment activities. This inherent presence of speculation has tainted the whole idea of investing with a speculative bias. We speculate only about things that we do not know in full. If we knew, then there would be no need to speculate! The foregoing sentence is a universal truth that applies to all walks of our lives (including matters of religious significance). So, the ability to know and infer more about an investment with the available data (of course, in the public domain) should reduce speculation.

The Sarbanes-Oxley Act² of 2002 essentially leveled the playing field for investors so far as the availability of the information is concerned about US listed public companies. Many other national governments have also made similar legislations requiring listed companies to disseminate corporate information at the same time to all the investors, big or small, institutional or individual, professional or retail. Only exception however, are the insiders (company executives) who will always retain a distinct advantage over others in respect of information, therefore they are heavily regulated. Since the information (raw data) is made available to everyone at the same time, the only edge one can develop is through superior analysis. From this we can conclude that, better the quality of analysis lower the need for speculation.

2. Measure of Risk

Risk can be defined as a probability of loss. Modern Portfolio Theory proposes the use of standard deviation of past returns, a statistical calculation, as a measure of risk. Don't get scared away by the word statistics. The concepts used in this book are not more difficult than found in high school mathematics books. You might object to using past data to predict the future, but then if you cannot use past data, what else do we have? We only have memories of our past to guide our future, so this is one reality we can't escape from. There is no future without a past!

The standard deviation measures the variability of returns (of an asset or a portfolio) over a period of time. Let us say, the annual returns of an investment portfolio for last 5 years are 8%, 10%, -15%, 6%, -8%. The standard deviation can then be calculated by entering the formula in a cell in Microsoft Excel[®] spreadsheet, "=STDEV(8, 10, -15, 6, -8)". You will see the calculated value as 11.05%. For the same data, the mean (average) of the returns is 0.2% (8+10–15+6–8 divided by 5).

How to make sense out of standard deviation and mean? Assuming that the distribution is normal (bell shaped curve), we can calculate the confidence intervals using the following equations

68.3% Confidence interval = Mean \pm 1 * standard deviation

95.4% Confidence interval = Mean \pm 2 * standard deviation

99.7% Confidence interval = Mean \pm 3 * standard deviation

Note: Let us say, a ball is thrown vertically upwards into the air. The chance of it returning directly back to your hand will be lower than the chance of it falling within the radius of 1 meter from you. The chance of it falling within a radius of 1 mile from you will be most likely 100%. Therefore, higher the certainty we demand of the future projections, wider will be the interval (range).

In our case, mean = 0.2% and the standard deviation = 11.05%, replace them in the above equations to find the confidence intervals.

(a) 68.3% confidence that the return will be in the range of -10.85% to 11.25%

(0.2–1*11.05) to (0.2+1*11.05)

(b) 95.4% confidence that the return will be in the range of -21.9% to 22.3%

(0.2-2*11.05) to (0.2+2*11.05)

(c) 99.7% confidence that the return will be in the range of -32.95% to 33.35%

(0.2-3*11.05) to (0.2+3*11.05)

Now ask yourself a question. If you can't tolerate a loss of 5%, is this investment safe for you? Even with a 68.3% confidence, you could lose more than 10%.

I don't know of any retail investor who uses these methods to measure the risk of his/her portfolio. However, professionals like fund managers certainly make use of these concepts to compare standard deviation of their portfolio against that of the benchmark as a measure of relative risk. If a fund manager is managing some of your assets, you may find these statistical terms in the periodic fund statements. A little exposure to some of these concepts will go a long way in understanding these statements and as a result your own investments better.

If you think these concepts are too difficult to grasp, think again. Because, these days, some primary school student progress reports even contain mean and standard deviation of marks to help parents understand the position of their children with respect to the overall class and level. So, learning them will certainly be of use in fields other than investing as well!

3. Risk Tolerance

The standard deviation of past returns only measures the risk (variability) of the investment, but not necessarily the risk *faced* by the investors. This is because risk *means* different things to different people. Consider three investors who bought a portfolio of shares (after thorough analysis) for a total of USD 10,000. So, the perceived risk of the portfolio as measured by the standard deviation is the same for all the three investors.

Let us assume, the first investor is working as an executive with an annual income of USD 120,000 and she funded the account with her own savings. The second investor, a retiree, funded the investment account with her retirement savings. The third investor put in only USD 4,000 and borrowed the balance from a friend. Now, if the portfolio value drops to USD 7,000, everyone will suffer the same paper loss of USD 3,000, but not everyone will *feel* the loss in the same way. First investor may not even notice the impact whereas the other two investors could have sleepless nights, impacting their rational behavior. This means, risk is a concept related to investor's own behavior and circumstances in addition to the type of investment itself. The aspect of the risk that relates to the investor's behavior and circumstances is known as 'risk tolerance'. There are two parts to this: (a) investor's ability to take risk (b) investor's willingness to take risk.

4. Ability to take Risk

The ability to take risk is very easy to understand. If you have a million dollars and you wish to buy a property for USD 40,000, your ability to take this risk is very high. Even if you write-off this investment you will not be broke. However, if you want to buy a house for USD 5 million with a debt of USD 4 million from the bank, the risk is far higher. So, the ability to take risk is a measure of investment size relative to your overall wealth and circumstances. All else being equal, wealthy individuals have higher ability to take risk because, short-term volatility (market corrections) in asset prices will not affect their living standards or their emotional balance. The same cannot be said of people with modest assets; even a small market correction can trip their ambitions and leave them as emotional wrecks.

Similarly individuals with an employment of permanent nature with pension benefits have higher ability to take some risk. Short-term losses will not affect them emotionally. People with part-time work will not have that luxury, especially if they expect their investment portfolio to supplement their income.

Investor's age is another important criterion. Assume that you are 45 years old now and you are starting to invest for your retirement in 20 years. By the end of your investment time horizon, you will be 65 years old and re-employment may not be an option. Remember, ability to work till very late in life is great, only if it is an option, not when it is a necessity. If you fail to achieve your investment goal, you may not have a fallback provision to remedy the situation forcing you to eventually take a hit in your retirement lifestyle.

On the other hand, if you had started at 30, you would be only 50 years old at the end of your investment time horizon (20 years). You would then have a much greater possibility of working for another 10 years easily. This option of deferring your retirement gives you a greater flexibility and therefore additional ability to take risk.

5. Willingness to take Risk

The willingness to take risk is a psychological measure and therefore involves a subjective assessment. People are risk averse or risk seekers by their inherent nature. Their own psychological make-up determines the type of people they really are when it comes to taking risk. Some people are generally cautious while others enjoy (and look forward to) taking risks. The risk taking or risk averse behavior of people shows up in other aspects of their lives as well, not necessarily restricted to investment field alone. Contrarily, people who are risk-seekers in other aspects of life, such as business owners, can be very cautious when it comes to investing. Some independent financial advisors can administer questionnaires with score system designed to estimate an individual's willingness to take risk. It would be beneficial to go through such a psychological profiling to determine yours. A broad classification of investors based on their behaviors and the risktaking decisions is provided below in order to figure out where you stand.

a. Cautious Type

The cautious type investors are very sensitive to short-term investment losses even when their time horizon is long. Most of their investments will be in bank deposits and government bonds. They are more likely to keep their bonds to maturity; so less trading. They are the type of people who, after making a couple of initial losses in stocks, vow never to enter again. In other words, they are bad news for the broking industry; banks would just love them, as they are good suppliers of cheap money.

Being cautious is OK if you ask me; you may not make great returns but you will not also lose sleep over your investments. You will be doing fine without reading this book. However, if you wish to improve your investment returns you may follow the tools and techniques provided in this book or seek the services of a fund manager.

b. Spontaneous Type

The spontaneous type investors make their decisions based primarily on *feelings* of *fear and hope*. They are active risk-seekers. They get more concerned with missing an investment opportunity; so they rush to buy at the market top (fear of losing profits) and rush to sell at the market bottom (fear of more losses). They constantly readjust their portfolio, hence more trading and associated costs. They are the delight of the investment industry!

If you find yourself to be spontaneous type, you need to be far more careful. Just remember, you may require real help; the tools and techniques in this book can certainly provide the much needed knowledge, but reading the books alone can't develop mastery over your own emotions such as fear and hope; robust risk management and strict discipline to play by your own preset rules are required. If you possessed the self-discipline yourself, splendid; if you didn't then you require a risk manager (stronger than you) to monitor your trading activities and to implement a cut-loss strategy. If your spouse can act as your risk manager, your portfolio (and possibly your marriage) will be in a better shape. Or you may also choose to use a fund manager to handle your portfolio.

c. Sensible Type

The sensible type, as the name suggests are the most sensible investors of all. Their decisions are based primarily on *analysis and thinking*. They spend more time analyzing potential investments and doing their own research. They are less emotionally attached to their investments and they take full responsibility to their investment actions and the results.

Based on your own investment track record, try to place yourself into one of the three groups. You may ask your spouse or a friend to make an impartial study of your track records to help you with this task. Even though it may be embarrassing initially, go ahead with this simple exercise to find out the truth about your personality as an investor.

If you cannot place yourself easily into one of the three groups, a psychological profiling conducted by an independent financial advisor may be beneficial. As

we are talking about psychological make-up of people, there would be as many a number of types as there are human beings on this planet. So, the idea is to help you figure out which one of these broad categories you stand closer to.

The worst possible combination is to be a risk-seeker and be a spontaneous type of investor. Financial markets offer a great variety of opportunities to lure these people to speculate. Such people will have an intense urge to buy into the high-flying stocks without any regard to fundamentals, putting their financial health in jeopardy. The burden of this topic is to bring a certain level of awareness as to how our psychological make-up can affect our investment decisions.

6. Investment Returns

Generating a reasonable return is the main objective of any investment. Unlike risk, calculating (investment) returns is fairly straightforward. There are no subjective judgments involved. We will look at some of the common types of investment return calculations in this section.

a. Holding Period Returns

Let us say, you have invested USD 1000 in a portfolio of stocks and three months (90 days) later it is worth USD 1050. The holding period return (HPR) is (1050-1000)/1000=0.05=5%. The return on investment is 5% during the holding period of 90 days. This is actually the realized return, which is indisputable.

b. Projected Returns

Sometimes you will come across prospectus of funds that indicate projected returns. Such returns are usually calculated by extrapolating a (usually good) set of results over a longer period of time. In the previous example, the holding period return is 5% during 90 days period. From this result, one can calculate the annual return using the formula below:

The annual return = $(1+HPR)^{365/90}-1$ = $(1+0.05)^{365/90}-1$ = 1.219-1

The annual return = 21.9% (projected)

If you held on to that portfolio of stocks for the entire year then you would have known for sure what your *real annual return* would have been. You might have even lost money if you held on to it for the whole year. However, since you had already sold the portfolio, the annual return is only a mathematical calculation (an extrapolation of earlier results). The reason for this illustration is to differentiate between the actual and calculated results. When you find 'calculated' or 'projected' returns in fine prints of a fund prospectus you must be able to notice the difference.
c. Multi-period Returns

The next question is how to calculate the returns of a multiple-year performance. Recall the example in Section-2. Given the annual returns for the past 5 years 8%, 10%, -15%, 6%, -8%, the total return was calculated as,

```
Total return = (8+10-15+6-8)
Total return = 1%
```

It means if you had invested \$1000.00 five years ago, you must have made 1% return (total return) at the end of the 5 year period. The final value now must be USD $1000*1.01 = USD \ 1010.00$. This method of calculating the multi-year returns is incorrect, as in reality the portfolio value will not be USD 1010.00. The correct method of calculating the total return is illustrated below.

```
Total return = 1.08 \times 1.10 \times 0.85 \times 1.06 \times 0.92 = 0.98476.
```

Year 1, +8%	- USD 1000.00*1.08	= USD 1080.00 at the end of Year 1
Year 2, +10%	- USD 1080.00*1.1	= USD 1188.00 at the end of Year 2
Year 3, -15%	– USD 1188.00*0.85	= USD 1009.80 at the end of Year 3
Year 4, +6%	- USD 1009.80*1.06	= USD 1070.39 at the end of Year 4
Year 5, -8%	– USD 1070.39*0.92	= USD 984.76 at the end of Year 5

This implies that at the end of the 5-year period we will end up with USD 984.76 instead of USD 1010.00 calculated earlier. So, to calculate the multiperiod return you must multiply (not add) the annual returns.

d. Portfolio Returns

To calculate the portfolio return, you must first multiply the returns of each asset with its corresponding percentage weight in the portfolio and then calculate a sum total of all the products. For example, let us assume only two assets viz. 70% stocks and 30% bonds in the portfolio. If the return of stocks is 10% and that of bonds is 6%, then the return of the overall portfolio is 0.7*10 + 0.3*6 = 8.8%.

7. Sharpe Ratio

Nobel Laureate William F. Sharpe developed a method for calculating the riskadjusted performance of a portfolio known as Sharpe ratio.

Sharpe Ratio = <u>Portfolio Return – Risk free rate</u> <u>Standard deviation of return on the portfolio</u>

Formula: Sharpe Ratio

The numerator is the difference between the portfolio's mean return and the mean return of risk free asset. In other words, it is the extra reward the investors receive for taking risk. The risk is measured by the standard deviation of return. Sharpe ratio, therefore measures the mean excess return per unit of risk. Sharpe ratios can be used to compare the risk-adjusted performance of two portfolios; the higher the Sharpe ratio, the better is the portfolio's performance relative to

its risk and vice versa. However, it must be noted that this ratio is meaningful only when it is positive and portfolio returns form a normal (bell shaped curve) statistical distribution.

I don't expect retail investors to calculate returns, standard deviations and Sharpe ratios of their portfolios periodically. However, if you are using a fund manager to manage some of your assets, then you may find Sharpe ratios in the fund statements. A little knowledge on this subject will enable you to understand the statements and pose intelligent questions to your fund manager.

8. Required Returns

Recall our discussions on developing investment goals in Chapter 1. The next step is to calculate the required returns for those goals. But the task is really simple and mechanical; there are no decisions or considerations to be made. By merely entering the data gathered in the goal statement in a financial calculator you should be able to calculate the required returns.

As a retail investor, the first item that needs to be in your 'toolbox' is the knowledge to use a financial calculator, which is not rocket science, by the way. Financial calculators are used for wide range of applications such as mortgage calculations, car loan calculations, investment planning etc., This section will be useful to you even if you are already familiar with using a physical financial calculator. What you will find in this section is the required formulae and procedure to construct your own financial calculator using Microsoft Excel[®] worksheet. The advantage of using Excel[®] spreadsheets over a conventional calculator is the ability to save the calculations for easy retrieval along with accompanying notes and assumptions. Furthermore, you can also work out many scenarios by slightly varying one or more of the parameters. I am sure, once you start using it, you cannot do without it!

A typical financial calculator application involves a total of five parameters. They are Present Value (PV), Final Value (FV), Number of periods (N), Interest per period (I/Y) and Periodic Payment (PMT). The calculation requires the values for any four of them to calculate the fifth one.

a. Required Return Calculation for a Savings Goal (Chapter 1)

Open up a new $\text{Excel}^{(6)}$ spread sheet and enter the values and formulae in appropriate cells as given below.

Cell C3: Enter the value for PV, in this case 45000 Cell C4: Enter the value for FV, in this case 75000 Cell C5: Enter the value for PMT, in this case 5000 Cell C6: Enter the value for N, in this case 3 Cell C7: Enter "=RATE(C6,-C5,-C3,C4,0)"

In the cell C7, you will see the value 9.19%. We must now adjust the required return for inflation. The expected inflation during the time horizon is 3%.

Cell C8: Enter the value of Inflation, in this case 3%Cell C9: Enter "=((1+C7)*(1+C8))-1"

If you find the value 12.46% in cell C9, then the spreadsheet has been setup correctly and you may now save it as 'Req-Returns-Savings.xlsx'. You can now use this spreadsheet to calculate the required returns for your own specific goals.

Exercise: Calculate the required returns for the goals a & b in Section 6 (Chapter 1) and verify that the answers are 12.04% and 7.42% respectively.

b. Required Return Calculation for a Spending Goal (Chapter 1)

Now we will construct a spreadsheet to calculate the required return for a Spending Goal, in which funds are being withdrawn periodically (e.g. during retirement) Open up another new Excel[®] spread sheet and enter the values and formulae in appropriate cells as given below.

Cell C3: Enter the value for PV, in this case 800000

Cell C4: Enter the value for FV, in this case 150000

Cell C5: Enter the value for PMT, in this case 50000

Cell C6: Enter the value for N, in this case 25

Cell C7: Enter "=RATE(C6,C5,-C3,C4,0)": Note the absence of minus sign before C5, indicating that USD 50,000 is being taken out of the portfolio to meet living expenses during retirement.

We must also adjust the required return for inflation. Let us just say the historical inflation is 3%, then

Cell C8: Enter the value of Inflation, in this case 3%Cell C9: Enter "=((1+C7)*(1+C8))-1"

If you find the value 7.53% in cell C9, the spreadsheet has been set-up correctly. Knowing that the spreadsheet is correct, you may then enter the values from your own long-term goal (spending) to calculate its required return.

Note: You must always consider the after-tax returns. The tax effects are outside the scope of this book and therefore they are not being discussed here. The 'targets' indicated in the purpose statements are 'after-tax' figures, net of all relevant taxes.

How to use the Required Returns?

The calculated required return of a financial goal is the rate of return to be achieved in order to meet that goal. The written statement of your financial goal has now been converted into a number, to act as a compass to choose a right combination of investments. With this knowledge you can begin to look for asset classes that offer historical returns of at least equal to the required returns of your own goals.

For example, if the required return for one of your goals is 5% and if the risk-free Government bond offered you 6% return, should you consider anything

else? Obviously not. Your investment objective in this case will get easily fulfilled without having to shoulder any additional risk at all.

However, this process may not always be as straightforward. For example, if the required return for another goal is 8%, investing in the 6% yielding risk-free Government bond may not fulfill your goal; you must look for, may be, corporate bonds or stocks. If good quality corporate bonds offer the required 8% returns, then you don't have to undertake the increased risk of investing in stocks.

Furthermore, you may also face dilemma situations when your goals demand higher returns (than risk-free returns) necessitating you to seek more risky investments while your risk tolerance may not permit such high risks. If your risk tolerance does not allow taking risks posed by corporate bonds then you would have to make good with only 6%; you will be fully aware that your goal will not be achieved.

Thus, setting goals, calculating the required returns and using them to chart your investment journey will prevent you from taking unnecessary risks and also avoid holding too much money in your savings accounts. Both are detrimental to your financial and emotional wellbeing.

9. Power of Compounding

This is another concept that you must be aware of as an investor. The basic concept here is to put the interest (or returns) earned in the previous years to work in addition to the principal. The returns earned may not appear significant in the initial years; however it can make a huge difference in the later years when the interest earned can be many times more than the principal itself.

Assume that you have just joined a company at the age of 25. You receive an annual salary of USD 30,000 and you are able to save 10% i.e., USD 3,000 every year. You intend to retire at the age of 60, after 35 years of service and you are able to get an after-tax return of 10% per annum on your savings.

Make a guess, as to what will be the final value of your investment at the end of 35 years. Write it down in the space provided below:

The value of my savings would be USD ______. Just make a guess and write down whichever number comes to your mind.

Open up another new Excel[®] spread sheet and enter the values and formulae in appropriate cells as given below. You may then save the file as PO Compounding.xlsx.

Cell C3: Enter the value for PV, in this case 3000 Cell C4: Enter the value for PMT, in this case 3000 Cell C5: Enter the value for N, in this case 35 Cell C6: Enter the value for I/Y, in this case 10% Cell C7: Enter "=FV(C6,C5,-C4,-C3,0)" Cell C7 will display the calculated value for FV; write it in the space provided below.

The value of my investment as per the calculations is USD

What is the difference between your initial estimate and the actual value from the calculation? Write down the difference in the space provided below:

The difference is USD ______. Most people I have posed this scenario to, have arrived at a number around USD 400K; they started with a mental math of 35*3000 = 105K; add another 300K for the annual returns. It is an underestimate by over 100%.

We will now calculate your total earned income over the period of 35 years assuming that the annual salary remained at USD 30,000. It is rather simple to calculate., USD 30,000*35 = USD 1,050,000. After working for an entire lifetime, you would have earned a little over a million dollars. Of course, it is only the earnings part of the story; if you also consider the expenses then at the end of it you may not have much left to show for the million dollars earned.

Now compare the total earnings (over a million dollars) with the inconceivably high value of over USD 890K with a mere 10% savings of USD 3000 per year. How is that possible? The secret lies in the 'power of compounding'. Compounding is simply reinvesting the original principal and the earned interest at the same rate of return; thus growing the principal base continuously. With this basic understanding on the power of compounding let us move on to discover some of its secrets using a few scenarios.

Scenario 1

Let us assume that you have delayed the start of your investment plan by a mere 2 years. That is, you have become 27 years old when you started the plan. The total number of years is reduced to 33 instead of 35. Recall that your yearly contribution is USD 3,000 per year; so there is an actual reduction of USD 6,000 in contribution. In your spreadsheet enter the value '33' in Cell C5 in place of '35'. Write down the calculated value _____.

Lesson 1

What is the implication of delaying your investment plan? Not a mere USD 6,000 but a whopping USD 146,318.47, a 18% fall in the final value. The lesson from this scenario is that small change in the period has huge impacts on the final values of your investment; so, start early. If you have not done yet, begin it at once. Don't wait for another month or another year to pass-by.

Scenario 2

Let us assume that you are able to get an investment return of 11% per annum instead of 10% we had assumed earlier. In your spreadsheet enter the value '11%' in Cell C6 in place of '10%'. Write down the calculated value ______.

Note: Enter '35' in the cell C5 again to bring it back to the base scenario.

What we learn is that a mere 1% increase in the investment return has resulted in an increase of 26% in the final value.

Scenario 3

Let us assume that you are able to get only an investment return of 9% per annum instead of 10% we had assumed earlier. In your spreadsheet enter the value '9%' in Cell C6 in place of '10%'. Write down the calculated value _____.

You will observe that a decrease of 1% in investment return results in a decrease of 20% in the final value.

Lesson 2

From the above scenarios 2 & 3, you can infer that a small change in the investment return causes big change to the final value. Therefore always seek to invest in high return investments (subject to your risk tolerance) and do not keep money in savings accounts that pay meager interests for longer periods of time.

10. 72 Divided by Return Rule

There is a simple and easy to use formula to calculate the time (in years) it would take to double your investment capital. If the return on your investment is 6%, then it would take approximately 12 years (72 divided by 6 = 12) for your investment to double. For a higher return of 10% it would only take approximately 7.2 years (72 divided by 10 = 7.2) to double. If you leave your money in the bank at 1% interest rate, it will double in roughly 72 years!

Open up another new Excel[®] spread sheet and enter the values and formulae in appropriate cells as given below. You may then save the file as 72divReturn. xlsx.

Cell C3: Enter the value for PV, in this case 100

Cell C4: Enter the value for FV, in this case 200 (twice the PV)

Cell C5: Enter the value for PMT, in this case 0 (no other payments)

Cell C6: Enter the value for I/Y, in this case 1%

Cell C7: Enter "=NPER(C6, -C5, -C3, C4, 1)"

(Note the minus sign before C5 & C3 indicating negative cash flows from you)

You will find the value 70 in cell C7, which is pretty close to 72 (72 divided by 1) for an approximation.

With this formula you can easily see that if your money is earning peanuts and the inflation is 6%, then your purchasing power will be halved in 12 years (72/6). In other words, what used to cost USD 100 would increase to USD 200 at an average inflation rate of 6% over 12 years. If the savings do not grow in tandem, you will realize serious reduction of purchasing power.

11. Retirement Plan Spreadsheet

In this section, a typical retirement plan has been illustrated for a person, aged 25, who has just entered workforce and is expected to work till 60 years of

age, implying a 35 years of employment. We will use Microsoft Excel[®] for this illustration providing you with the format and formulae for the calculations to help you construct your own spreadsheet. The duration has been split into four timeframes viz., 5 years (from 26 to 30 years of age), 10 years (from 31–40 years of age), 15 years (from 41–55 years of age) and 5 years (from 56–60 years of age). This is done to allow for different annual contributions people can afford at different phases in their lives. For example, when you are new at the workforce your take-home pay may not be great, but you may still have obligations like paying up your study loans, marriage and settling expenses etc., resulting in lower savings in the earlier years. As you grow older, you may be able to save more as your salary is likely to grow faster than your expense commitments.

Another reason for splitting the duration into many time frames is to accommodate for different risk/return propositions. For example in the illustration below, the return expectation in time frame 4 is 5%, which is far less than that (12%) in the time frame 1, because as the person gets closer to retirement the risk tolerance reduces due to decreasing time-horizon.

Sr. No.	Description	Time Frame 1	Time Frame 2	Time Frame 3	Time Frame 4	Remarks
1.	Initial amount (PV)	USD 0 (cell C3)	USD 19,059 (cell D3)	USD 145,057 (cell E3)	USD 731,668 (cell F3)	
2.	Regular an- nual savings (PMT)	USD 3,000	USD 6,000	USD 10,000	USD 20,000	Increasing savings
3.	Number of years (N)	5	10	15	5	
4.	After Tax an- nual return (I/Y)	12.00%	10.00%	8.00%	5.00%	Decreasing return ex- pectations
5.	Value of the savings at the end of the period (FV)	USD 19,059 (cell C7)	USD 145,057 (cell D7)	USD 731,668 (cell E7)	USD 1,044,327 (cell F7)	

 Table 2.2
 Typical Multi-Period Retirement Plan Spreadsheet

To have it done in Microsoft Excel[®], open up a new spreadsheet and follow the steps provided below. The first two rows and columns have been left out for entering appropriate titles and descriptions.

Time Frame 1

- Cell C3: Enter the value for PV, in this case 0
- Cell C4: Enter the value for PMT, in this case 3000
- Cell C5: Enter the value for N, in this case 5

Cell C6: Enter the value for I/Y, in this case 12% Cell C7: Enter "=FV(C6,C5,-C4,-C3,0)"

In cell C7, you will see the value 19059. It means the terminal amount at the end of the Time Frame 1 is USD 19,059. This amount will become the PV for the next Time Frame 2.

Time Frame 2

Cell D3: Enter "=C7": This is the result of the previous calculation, USD 19,059

Cell D4: Enter the value for PMT, in this case 6000

Cell D5: Enter the value for N, in this case 10

Cell D6: Enter the value for I/Y, in this case 10%

Cell D7: Enter "=FV(D6,D5,-D4,-D3,0)" : you could also place the cursor on C7 and perform a copy and paste on D7.

In cell D7, you will see the value 145057. It means the terminal amount at the end of the Time Frame-2 is USD 145,057. This amount will become the PV for the next Time Frame 3.

Time Frame 3

Cell E3: Enter "=D7": This is the result of the previous calculation, USD 145,057

Cell E4: Enter the value for PMT, in this case 10000

Cell E5: Enter the value for N, in this case 15

Cell E6: Enter the value for I/Y, in this case 8%

Cell E7: Enter "=FV(E6,E5,-E4,-E3,0)": you could also place the cursor on C7 and perform a copy and paste on E7.

In cell E7, you will see the value 731688. It means the terminal amount at the end of the Time Frame 3 is USD 731,688. This amount will become the PV for the next Time Frame 4.

Time Frame 4

Cell F3: Enter "=E7": This is the result of the previous calculation, USD 731,688

Cell F4: Enter the value for PMT, in this case 20000

Cell F5: Enter the value for N, in this case 5

Cell F6: Enter the value for I/Y, in this case 5%

Cell F7: Enter "=FV(F6,F5,-F4,-F3,0)": you could also place the cursor on C7 and perform a copy and paste on F7.

In cell F7, you will see the value 1044327. It means the terminal amount at the end of the Time Frame 4 is USD 1,044,327. This example helps to illustrate how you can retire as a millionaire with a habit of investing only 10–20% of your annual earnings over your entire working life.

Having constructed the spreadsheet, you can customize it to suit your own needs. If you are already in your mid-40s while reading this book obviously you may not have the luxury of four time frames spanning over 35 years of working life. You will need to make good with 2–3 time frames over a period of less than 20 years; nevertheless you must start from where you are right now. By using electronic spreadsheets you will also be able to easily track the actual performance against the plan. In this example, we had assumed a single investment returns for each time frame but in real life it may hardly be the case. So, you must make modifications to adjust for the actual returns making the spreadsheet a live document, your own roadmap to your financial destiny.

12. Low Risk - High Returns

I am sure you have heard of people saying 'low risk – low return, high risk – high return'. This is basically a flawed mantra imbibed into the psychic of investing public. We have seen in the earlier chapter how money in the bank easily qualifies for 'low risk – low return' part of the saying. The same goes for local currency government bonds (e.g. US Treasury Securities), which offer low returns with low perceived risk. It is a common wisdom that dictates it is not possible to realize high return on any investment without facing correspondingly high risk and hence 'high risk – high return' part of the saying. While it is relatively easy to observe 'low risk – low return' theory in operation, it is not obvious to a common investor the works of the 'high risk – high return' phenomenon.

In fact, all too often common retail investors observe (with regret) 'high risk – negative return' in their portfolios. Thus, based on the experience of many millions of retail investors, we will rewrite the above statement as low risk – positive return, high risk – negative return. The greatest danger in believing in 'high risk – high return' concept is that it lets people automatically assume high risks in seeking high returns. And when they see negative returns in their portfolios instead of the expected high returns they become host to all kinds of negative emotions leading to confusion, guilt, regret etc., Therefore the first lesson one must learn is that seeking high-risk investments need not automatically bring in high returns.

But that is not all. The concept of risk also encompasses your understanding of the investment. Is scuba diving risky? The answer can be 'yes' or 'no' depending on whom the question is addressed to. It is not risky for trained scuba divers (and instructors) and 'yes' for everyone else. It is the same with investments also. If you know a particular investment well (through proper analysis), then you will be better prepared to deal with a new challenge, which means your perceived risk is low. On the other hand, if you didn't know your investment well enough, your ability to respond to a new challenge will be greatly hampered, in this case your perceived risk is relatively higher.

Therefore, a double-pronged approach must be used to increase investment returns while keeping the risk low. Every idea, strategy or technique you will find in this book can be classified into one of two categories, either to lower risk, or to increase return, so that you can experience 'low risk – high returns' in your portfolio.

To Summarize...

- 1. The presence of a speculative element in any investment is inevitable. With thorough analysis, however, speculation can be significantly reduced.
- 2. Except for insiders, all other investors are at par in respect to timing and the availability of data. The only way to develop an edge to investing is by performing superior analysis.
- 3. The risk tolerance of an individual has two components a) Ability to take risk b) Willingness to take risk.
- 4. The ability to take risk is based on your resources, nature of employment, other sources of income, age, marital status, expense levels, number of dependants etc.,
- 5. The willingness to take risk is a psychological attribute; it is beneficial for you to have a risk profiling done by an independent financial advisor.
- 6. The holding period returns measures the real returns for any investment.
- 7. When you come across 'projected' or 'calculated' returns in any prospectus of investment funds, then you must suspect that a good set of results could have been extrapolated for the entire period, painting a overall good picture which may not necessarily be real.
- 8. To calculate the total multi-period returns, you must multiply, not add the individual annual period returns.
- 9. Power of compounding means putting the interest earned in the previous periods to work. Small change in the total number of investment years has huge impacts on the total value. So, start early.
- 10. Small change in the investment returns earned also has huge impacts on the total value. So, seek to invest in high return investments. This, of course, is subject to investor's risk profile.
- 11. As an approximation you can use the '72 divided by returns' formula to calculate approximate time taken to double your investment.
- 12. If you are found to be a Spontaneous type of investor then you must consider the following:
 - a. You may choose to use the services of a fund manager to handle your portfolio.
 - b. If you would like to do your own investing then you require a strong risk manager.
 - c. You must also implement a strong cut-loss policy before (not after) entering into your trades.

- d. You may consider becoming a member of a local investment club (or forming one) for continuous learning.
- e. Seek the counsel of a financial advisor to independently assess your risk tolerance.
- 13. Even if you find yourself to be a sensible investor you may still follow some of the above suggestions.
- 14. Make absolutely sure that you have completed your investment goals, calculated the required returns and figured out your ability & willingness to take risk.
- 15. Before leaving this chapter, make a plan for your own retirement.

3. First-Things-First

(Putting the House in Order)

Life Insurance is not a savings product, it is a service for which a fair price must be paid.

1. Build Your Capital

If you are new to the workforce, you must save money to build your capital. If you are already in the workforce, savings is still the best way. Come up with a regular savings plan first. Save a certain percentage of your monthly income, before spending. Not the other way round. If you save what is left, then most likely there will be nothing left to save. Open up another bank account and set up a standing instruction to your bank to automatically transfer out a fixed amount every month from your existing bank account (to which the salary is credited) to this newly created account. Make sure the new account does not have the ATM facility and the checkbook!

Get rid of high interest paying debt like credit card loans as soon as possible. You must first fix the leaks in the pot before starting to cook! Credit card companies charge well in excess of 20% per annum on outstanding debt. It is a huge drain on your finances, which you can ill afford anytime.

2. Cash

Before you allocate anything for investing, you must ensure that you have sufficient funds in ready cash to meet unforeseen emergencies. If you are a salaried person with a stable income, cash reserves to meet about 6–9 months of total (personal and family) expenses may be considered reasonable. On the other hand, if your income is based on commissions, then you may need to consider much more than 6 months, in the order of 12–15 months of expenses. However, it must be noted that 6, 12, 15 months are all arbitrary numbers; the important thing is whatever you choose, you must feel reasonably secure about your short-term stability. The reason for this is that all decisions (whether for long-term or short-term) are taken based on your *current* frame of mind. In other words, when you are making a decision today, for your retirement 20 years away, you will be making it with your *present view* of your life 20 years hence. So, your present day emotional stability is of paramount importance for your investment success; sufficient cash to meet unexpected emergencies will be essential to ensure that stability.

Call for Action	
Fill in the answer in the space pro	ovided below:
The type of job:	Regular employment/Part-time/Commission based/Others
My average monthly expenses:	USD
Reserve amount:	USD
Fill in the answer in the space pro- The type of job: My average monthly expenses: Reserve amount:	ovided below: Regular employment/Part-time/Commission based/Othe USD USD

Another side benefit in doing this exercise is that you will *know* what your monthly expenses really are, if you had not already figured that out! Remember, some expenses are annual, like paying road-tax, insurance premiums, annual vacations etc., so you must consider them to arrive at the average monthly expenses.

On top of the cash for emergencies, you must also consider maintaining a sum of 'unused cash' (or near-liquid assets) kept ready for future investments, 'once in a lifetime' opportunities, rights issues etc., Keeping at least a minimum percentage of your investible assets in cash is a good discipline to master. You are never sure when a great opportunity will knock your doors, and if you don't have cash then, you will kick yourself.

3. Primary Residence

I don't like to think owning the primary residence as an investment. This is because you cannot divest this property without incurring a similar expense in buying another one. So, considering the primary residence as an investment does not make much sense, as there are no cash flows to you. But, selling the old property may trigger a tax-event; so you may end paying tax on capital gains (in countries where applicable) resulting in net cash outflow from you. However, if you downgrade to a smaller (cheaper) property; for instance from a townhouse to a smaller apartment because the children have moved out; then by all means the difference can be considered as an investible asset after you have actually moved to the smaller place.

There are many benefits that come with home ownership such as sense of security, ability to decorate your home to your own taste, not having to move often, not having to pay ever-increasing rents to landlords, pride of ownership etc., On top of all this, there is also a tax-benefit, i.e. the ability to receive rent without having to pay tax, which is not very obvious to everyone. Assume that you live in New York in a rental apartment and pay a monthly rent of USD 1,000. Assume also that you own an apartment in Atlanta, which you have rented out for a monthly net-rent (after expenses) of USD 1,000. On the account of rent, you are net-zero; what you receive as rent also goes out to pay as rent. However, the rental income from Atlanta flat is taxable. So, even though you are paying and receiving the same rent, because of taxes you become net-negative. Let us now assume that your company has transferred you to Atlanta and you begin to live in your own flat. In this case, there are no rent payables or receivables; you are considered to pay rent to yourself and this is not taxable! You become truly

net-zero. This is the hidden tax-benefit to encourage the owner-occupied home ownership.

There is another somewhat extreme view that suggests, primary residence is actually a liability not an asset. The logic for this stems from a definition that says *Assets generate cash flows to you; liabilities take away cash flows from you.* For example, if you had USD 1000 in fixed deposits and you received an annual interest of USD 30 a year, then it is an asset because it produces a cash flow into your portfolio. On the contrary, if you had taken on a loan of USD 1000 from a bank and you are required to pay USD 100 a month (principal + interest) for a year to settle the loan, it is a liability because the loan demands a certain cash flow from you. Applying the above definition, you may find the primary residence as a liability because mortgage, property taxes and home protection insurance premiums take cash out from you. In some instances, these costs may even be higher than the rents you must pay if you didn't own the property. In any case, any property purchased on loan is a liability because all loans are liabilities. The only reason why people don't think it is a liability is because they are confident of their capacity to repay the loan.

While I don't personally consider owning the primary residence as a liability, (having a roof over my head is a top priority for me and I am reasonably sure of repaying my loans) it is probably useful to consider this idea when you are thinking of upgrading to a bigger residence. Most people think that by simply buying a bigger property their assets have increased. In fact their liability, not asset, could have increased. By buying a bigger property to live in, you have to pay higher mortgage, higher property tax, increased utility bills and so on, thereby actually increasing the liability, not the assets.

It is not uncommon to see people taking cash-out mortgage loans from their primary residence and use the money on other investments. This strategy can be dangerous, because in a recession, their investments can go south and if they also happen to lose their jobs they cannot continue to service their mortgage payments. They can end up without roof over their heads and stand to lose much more in the process; loss of sleep, peace of mind and in some instances, even relationships. So, tucking your primary residence away from any type of investment risks is a simple and sensible idea, which will keep you out of harm's way.

4. Insurance

I had promised that this book is all about increasing returns and reducing risks; this section is about the latter. Insurance is a risk management tool that transfers risk from one entity to another for a price. The first item on the list is Life Insurance. The basic purpose of life insurance is to hedge against the risk of mortality. Who bears the risk of your checking-out earlier? Your family does. It is therefore very important to assess the requirements of the family before purchasing a life insurance policy. I know of so many people (I was one among them) who falsely believe that the life insurance is a savings product. This leads

to the false thinking that you must always attain a break-even, when at a day in far-away future, you must get back whatever amount you had paid in premiums. This approach is totally absurd.

Remember, life insurance companies are 'for profit' organizations that offer you a service to hedge against your mortality risk. In other words, the insurance companies take up your family's risk on themselves for a price. You, as a purchaser of that service, are expected to pay a reasonable sum of money for it. That is all there is to life insurance. If you try to combine savings feature, just to attain a break-even, then you may find yourselves (or your family may find to their utter disbelief) to be under insured!

The following example will serve as a proof to the above statement. The monthly premium for a life policy for Singapore dollars SD 30,000 (about USD 23,000) in 1998 was SD 98.25 (about USD 75). As per the policy illustration, the break-even occurs after 20 years. This means that the guaranteed surrender value would exceed the total amount paid in premiums after 20 years. Guess what is wrong with this insurance policy? The coverage of SD30,000 is so pitifully low; the family will out-spend the insured sum in less than a single year! The main purpose of life insurance is completely lost. Just to provide a comparison, (as of writing this book) one could take a term life policy that provides coverage of SD 250,000 for about one-third the monthly premium. More than 8 times coverage for one-third of the cost! Agreed, you will not get anything back from the term policy. But then the purpose of buying insurance is to hedge your risk; what is the point in doing it for namesake? Just think of life insurance as a necessary expense (like paying for auto insurance) to hedge your family's risk away and move on.

The next item on the list is the adequacy of medical insurance. The basic tenet here is that you must maintain an optimal level of medical insurance protection and should never find yourself to be under-insured. Today we are living in a world where medical costs can only go in one direction that is UP. So, it is sensible to buy adequate medical insurance protection covering at least all the major illnesses for you and your family.

The property insurance also deserves some mention here. Check if your properties have been insured. Verify what the coverage and exclusion details are. Check with the insurance company for availability of 'rider policies' to include some of those exclusions to ensure that the properties have been adequately insured. If your property were under mortgage, banks would normally require an insurance policy against the outstanding loan. In some countries, this is not mandatory. It is in your interest to have an insurance policy against death and permanent disability to cover the outstanding loan.

It is also common to find insurance products that combine insurance coverage with investment together in a single policy. In such cases, the premiums must be broken down and each product evaluated separately. This is not written to discourage you from considering financial products offered by insurance companies; you may certainly do so based on their individual investment merit. When you consider investment products, you must evaluate the soundness of the underlying assets just as you must do when you evaluate a stock before buying it in the stock market. You must be aware of the following features before deciding on the insurance linked products:

- □ As a combined policy, the investment time-horizon is generally longer; this can be an advantage since short-term asset price variations will not affect your long-term portfolio value.
- □ As the same amount of money gets invested at regular intervals 'dollar cost averaging' method will be employed to average out the effects of wild fluctuations in the asset prices. More details on 'dollar cost averaging' will be provided in a later chapter.
- ❑ As investments are made on funds as against individual stocks or bonds, it offers higher diversification. Putting your eggs in many baskets is obviously better than putting them in a single basket; but it is your responsibility to make sure that all the baskets are strong enough. There is a detailed discussion on diversification in a later chapter.
- □ Sales charges are applicable; annual management charges will be deducted from your account every year. So you must compare and evaluate them objectively.
- □ You must also check if there are any restrictions in switching from one fund to another.

There is another benefit of insurance that is worth mentioning here. Some wealthy individuals transfer part of their wealth to their beneficiaries using life insurance policies. In a single stroke, this method provides three significant benefits, namely:

- 1. Inheritance tax savings (in countries where applicable).
- 2. Very fast transfer of assets to the beneficiaries.
- 3. Bypass probate procedures and legal challenges.

Take a professional approach and seek help from an independent financial advisor, if necessary. The fundamental idea of insurance is to avoid financial distress in the face of unforeseen difficulties. When people are in financial trouble, they become vulnerable to make emotional decisions on their investment portfolio and the burden of this topic is to help reduce some of those emotional decisions.

re C	all for Action				
1.	Write down in the space provided insurance policies.	d below	the coverage	provided t	by all of your life
	Total Coverage provided:				
	Total Premium Paid:				
	Is the coverage adequate?	yes	no		
2.	Write down in the space provide insurance policies.	d below	the coverage	provided	by your medical
	Critical Illness Cover:	yes	no		
	Is the entire family covered?	yes	no		

- Write down in the space provided below the coverage provided by your property insurance policies.
 All your properties covered? yes no
 Are there any exclusion clauses? yes no
 Are there any rider policies yes no
 for the exclusions?
- 4. You may also seek expert counsel from an independent financial advisor on your specific situation in respect of your insurance protection.

To Summarize...

- 1. Savings is the best way to build your capital for investment. Start a regular savings plan first. Pay off your outstanding credit card debt at the earliest.
- 2. Adequate cash must be kept to meet unforeseen emergencies.
- 3. Keeping at least a minimum percentage of your investible assets in cash is a good discipline to master. You are never sure when a great opportunity will come your way, and if you don't have cash when you see one, you will regret.
- 4. Don't treat your primary residence as your investible asset. Taking cash-out mortgage loans from the primary residence and using the money for other investments can be dangerous.
- 5. Life insurance is not a savings product. When you combine insurance with other features such as savings or investment, evaluate both components separately.
- 6. Complete the 'call for action' templates provided in this chapter before moving onto the next chapter.

4. Traditional Asset Classes

(Stocks, Bonds and Such ...)

Asset allocation for gambling and speculation in financial market? Absolutely!

1. Fixed Deposits, Bonds (Debt instruments)

Fixed deposits are simply bank deposits that promise higher interest rates than the savings rates. In exchange for a higher return, you must hold the money in the account for a fixed period of time (maturity). If you must withdraw the funds before maturity, you may have to pay a penalty. Fixed deposits are also known as 'term' deposits or 'time' deposits. In the event of default by the bank, the deposit insurance will make up for the loss (up to a limit), deeming the fixed deposits safe.

Bond is a debt instrument, very much like a loan (I owe you—IOU) with a contract. In some jurisdictions, it can also be called as debentures. As in the case of a typical loan, there must be a lender and a borrower. Bond issuer is the borrower; it can be a corporation, a municipality or a government or any other legal entity. The lender supplies the cash to the borrower and receives the bond, thus bondholder. The contract governing the terms of the loan is called the bond covenant. As per the bond covenant, the issuer (borrower) of the bond must pay interests (coupons) at regular intervals and the principal (face value) at maturity. The bond covenants may also include several terms & conditions mandating or forbidding certain actions of the issuer.

Although bonds are traditionally thought to be safe investments, there are many risks associated with investing in them. The credit risk (default risk) is one of the most easily understood risks of all. It is the risk of the bond issuer (borrower) defaulting to pay up the interest or principal at stipulated time. What happens when the borrower fails on his obligations? The bondholders may force the issuer (borrower) to bankruptcy and claim its assets as stipulated in the debt covenant. The assets are then sold and the cash distributed to the bondholders. In some cases, the bondholders may take over control and restructure the whole company. In addition to the credit risk, there are many other risks associated with investing in bonds, which will be discussed in detail in a later chapter. For the present, it is sufficient to know that investing in bonds is *not* always riskfree.

2. Common Stock

Common stock is a security that represents fractional ownership in a company. It means that the common stock holder owns a share of company's assets minus liabilities and therefore the equity. Typically common stock investing refers to investing in a mature company whose shares are listed in a stock exchange. The ownership entails the holder of the stocks, cash flows (dividends) from the company's business and capital appreciation. The common stock holders exercise control over the company's affairs through voting, although some class of common stocks may not have proportional voting power.

If a company files for bankruptcy and ends up in liquidation, all the assets will be distributed to the claim holders of the company based on absolute priority rule. It means senior creditors are paid in full before paying anything to the junior creditors. In a bankruptcy proceeding, the bondholders (debt) are paid first before the company can pay anything to the common stock holders. In this sense, it may appear that investing in common stock is more risky. To compensate for this, the common stock holders get the following privileges.

- 1. Through their voting rights, the common stock holders elect the board of directors of the company; the board in turn controls the company. So, in effect the common stock holders control the company.
- 2. If the company does well the common stock holders get the unlimited upside, by way of increased income, dividends and capital appreciations.

The major focus of this book is investing in common stocks; so several chapters have been dedicated to discuss various aspects of investing in common stocks.

3. Preferred Stock

Preferred stock is a hybrid between debt and common stock; for it has characteristics of both debt and common stock. As in the case of debt, preferred stock issuer borrows money from the preferred stock holder (lender). Thus the borrowing part is debt like. Let us look at the repayment part. The company must pay fixed dividends to the preferred stock holders *before* paying any dividends to the common stock holders. The company may choose not to pay any dividends in a given year and preferred stock holders may get nothing at all for their investment in that year. However, when the company decides to pay dividends next year, it must pay the previous years' unpaid preferred dividends to the common stock holders first, *before* paying *any* dividends to the common stock holders.

For preferred stock, there is no maturity. The company can return the principal whenever it chooses, subject to a minimum holding period if imposed in the agreement, but there is no maturity. So, in effect the preferred stock may be viewed as an *unsecured loan* with full flexibility (uncertainty) in the timing of both the payment of dividends and the return of principal. Of course, the

quantum of dividends and principal is always known! In order to compensate for the uncertainty in timing (risk), the preferred stocks must offer higher investment returns than the conventional debt issues.

Preferred stocks are issued only by companies under financial duress when they are unsure of their ability to raise funds through conventional methods like additional debt, rights issue etc., at a reasonable price. Moreover, preferred stock issues are generally targeted to ultra rich individuals, sovereign wealth funds, investment holding companies etc., in other words, accredited investors. It is very rare to find preferred stock issues offered to retail investors. You may recall the USD 5 Billion preferred stock investment made by Berkshire Hathaway (Warren Buffett's company) in Goldman Sachs¹ in 2008. At the height of the global financial crisis, Berkshire's investment helped shore up market confidence in Goldman Sachs. In return, Goldman paid a juicy 10% preferred dividend to Berkshire. So, it is a win-win situation for both parties involved in the deal.

It must be noted that some investors view investing in preferred stocks as a thankless enterprise. The borrowing company issues preferred stocks usually in dire circumstances; but once the company comes out of its troubles it redeems the preferred stocks (after the minimum holding period). Thus the preferred stock holders do not get to enjoy the good prospects of the company. For this reason most preferred stock issues come bundled up with warrants at discounted exercise price and/or convertible preference shares. By exercising the warrants or by converting the preference shares, the preferred stock holders can become common stock holders and enjoy unlimited upside potential. In the event of bankruptcy of the company, preferred stock holders' claim is senior (high priority) to that of common stock holders and junior (subordinate) to that of the bondholders.

4. Comparison between Common Stocks, Preferred Stocks and Bonds

A table of comparison between common stocks, preferred stocks and bonds is provided below to serve as a ready reference.

Sr. No.	Feature	Common Stock	Preferred Stock	Bonds
1	Maturity	No	No. There may be a minimum holding period	Yes
2	Returning the principal	No	Yes, Company's choice when to pay back the principal	Must pay at ma- turity
3	Regular pay- ments	By way of variable dividends after pay- ing to the preference share holders.	By way of fixed dividends, before paying to common stock holders	Must pay fixed interest payments.

 Table 4.1
 Comparison between Common Stocks, Preferred Stocks and Bonds

4	Corporate Tax Effects	Dividends are paid from after-tax income.	Preferred dividends are paid from after- tax income.	Interest is deducted from pretax income. So, there is tax-ben- efit to the issuer
5	When the com- pany is doing very well	Unlimited upside.	Fixed returns. Chance of early redemption	Fixed returns.
6	On Bankruptcy of the company	Last to get whatever is left	Claim junior to Bonds but senior to common stocks	Senior to both common and pre- ferred stocks.
7	Voting Rights and therefore control over the company	Yes	No	No

5. Real Estate Investments

In this section, we will discuss about investing in properties such as homes, shops etc., for rental income and capital gains. This is not to be confused with buying your primary residence; it is really about buying properties for generating investment returns by renting them out to others.

Real estate investment is probably the most important part of an investor's total assets due to the amount of exposure involved. For most retail investors, the size of their real estate investment is usually larger than other investments such as bonds, fixed deposits, stocks etc., With each investment costing a few hundred thousands, the risk is also highly concentrated. But, there is something about investing in real estate, which is *uniquely* suited for working class retail investors for whose benefit, this book has been specifically written. But before seeing why, let us first focus on the process of a typical real estate investment.

Let us say a property costs USD 250,000 and the bank requires a 20% down payment. So you must pay USD 50,000 (USD 250,000*0.2 = USD 50,000) to secure the mortgage loan for the balance amount USD 200,000. Let us say you are 35 years old and you expect to work for another 25 years (till 60 years) and the fixed mortgage interest on a 25-year loan is 3.5%. We can calculate the monthly mortgage payment on the loan using the financial calculator application.

Open up a new Excel[®] spread sheet and enter the values and formulae in appropriate cells as given below. You may save the file as RealEstate.xlsx.

Cell C3: Enter the value for PV, in this case 200,000 (loan amount)

Cell C4: Enter the value for FV, in this case 0

Cell C5: Enter the value for N, in this case 300 (25 years times 12)

Cell C6: Enter the value for I/Y, in this case 0.292% (3.5 divided by 12)

(you can also enter "=3.5/12" in the cell C6)

Cell C7: Enter "=PMT(C6,C5,C3,C4,1)"

In Cell C7, you will see the value USD 998.34, which is the amount you must pay *every month* for the next 25 years to settle the mortgage loan. Assume

that you are able to rent this property for USD 600 per month net of expenses and taxes; your net cash outflow {rent income – (expenses + taxes + mortgage payment)} is only about USD 400 per month. So long as you are able to make the regular mortgage payments you will own the property at the end of the 25 years. So, what is the downside?

- 1. The interest rates can go up increasing your mortgage payments. Of course, the expenses and taxes can also go up; but the risk of interest rates going up is much higher.
- 2. You may not be able to find a suitable tenant, which can impact your rental income, either partially or fully.
- 3. Real estate prices are linked to economic growth and job creation, which need not always be on the rise. For this reason the property prices may remain subdued for prolonged periods.
- 4. There is a risk of the tenants performing poor maintenance, which may increase maintenance cost.

If you are able to continue your mortgage payments (e.g. steady nature of your employment income) in spite of the above setbacks, your exposure to the downside risks will be minimal. Then you stand to benefit from several positives from such real estate investments as listed below:

- 1. Due to the effects of inflation, there is a good chance of rental incomes going up in the long-term.
- 2. Increasing rental incomes will inevitably lead to higher property prices.
- 3. If at some point, within the mortgage payment period (25 years, in this case), the rental income exceeds the mortgage payments and expenses then you won't have cash outflows anymore. Then the property would become a positive cash flow type.

Positive Cash Flow Example

In the previous example, your net cash flow was about USD 400 per month. Now assume that you are able to rent your property for USD 1200 per month net of expenses; in this case you will receive about USD 200 (USD 1200 minus USD 998.34) per month after paying the mortgage loans. This is the *positive* cash flow from your property and it can continue perpetually. Such opportunities are truly golden because there is no monthly cash outlay. Effectively, the tenants (rent payer) service the loan to make you own the property.

This is the classic example of using Other People's Money (OPM) to get rich. The bank provides you with the loan. The rent payer services the loan and still there is some change left. So long as the rent can adequately cover the mortgage payment, expenses and taxes, you are on the road to owning the property *without putting in another cent*. In the long run, the value of the property and the rents can only go up making this into an autopilot cash flow system. Each property purchased like this (while you are still in active employment) can become a small *pension* cash flow during your retirement.

Equity and Leverage

In the above example, your initial equity is USD 50,000; your asset is USD 250,000 (value of the property) and your liability is \$200,000 (bank loan). So, you can put the numbers in the *magic formula of accounting*.

Assets	= Liabilities	+	Equity
\$250,000	= \$200,000	+	\$50,000

The above formula can be rewritten as below.

Equity	= Assets	-	Liabilities
\$50,000	= \$250,000	-	\$200,000

Let us assume that at the end of the first month your neighbor sold her house for \$275,000 and you believe that your house should also be worth the same (as both houses are identical). So, in theory the equity should increase to \$75,000

Equity	= Assets	-	Liabilities
	= \$275,000	_	\$200,000
Equity	= \$75,000		

As you must have noticed, a 10% increase in the asset value (from \$250,000 to \$275,000) has resulted in the increase of equity by 50% (from \$50,000 to \$75,000). This is the power of *leverage*. The leverage in this case is 5.

Leverage = Assets/Equity = \$250,000/ \$50,000 Leverage = 5

It means that for every 1% increase in the value of the assets, the equity will increase by 5%. Is using leverage a great way to quick riches? Does it always work in your favor? The answer is NO. It can work against you just as readily when the asset value drops. If on the first month, let us assume that instead of selling at \$275,000, your neighbor sold her house at \$225,000 only. By virtue of the fact that your house is exactly identical to your neighbor's house, the value of your house has now become \$225,000 also, 10% drop in value. What happens to your equity then?

Equity	= Assets	_	Liabilities
	= \$225,000	_	\$200,000
Equity	= \$25,000		

Now, your equity has reduced by 50% (from \$50,000 to \$25,000). That is, for every 1% decrease in the value of the assets, the equity will drop by 5%. So, the power of the leverage magnifies both the gains and losses.

Why Real Estate Investments are ideal for working people?

Here are the reasons why real estate investments are ideally suited for working class people.

- 1. The primary reason is the ability to service the mortgage loans from your regular employment income. If your employment is steady and you are reasonably young, then you should be able to seriously consider these opportunities.
- 2. The inherent leverage (loan) allows you to amplify your gains (and of course your losses); however, if you have the ability to make the mortgage payments regardless of the price fluctuations in the interim, the property prices will more than offset the erosion of money due to inflation in the long run.
- 3. The observed volatility of property prices is far less than financial investments such as stocks and bonds, simply because there is no ready market that displays the property price quotations in real time. In the absence of such real time market prices, even the novice retail investors can effortlessly avoid irrational decisions due to their behavioral biases. This is really significant because most of the perils and misery of investing in financial markets can be attributed to faulty human emotions. Lack of *real-time* real-estate prices can therefore be a blessing in disguise!

Watch out for these

While there are many positives about investing in real estate, there are also many pitfalls you must be aware of. Some of them are listed below:

- The leverage (loan) is inherent; therefore it amplifies both gains and losses. In the example above, your original investment is USD 50,000 (downpayment) and you have assumed a loan of USD 200,000. If subsequently, the value of the property goes up to USD 300,000, your equity (value-loan) will increase to USD 100,000, giving you a 100% return on your initial equity. On the other hand, if the value of the property drops to USD 200,000, then your entire equity will be wiped out, leaving you with a 100% loss.
- 2. Ability to make mortgage payments, in good times and bad, is extremely important. Even though real estate investment is suitable to working people in general, continuous employability is a must. If a person loses his job, it may be very difficult to continue with the mortgage payments (unless the property is a positive cash-flow type); the bank can then foreclose the loan and the investor can lose dearly.
- 3. If the loan were based on the floating rate, then the interest rates must not increase. Increasing rates means higher mortgage payments to the bank. If the rents are not rising fast enough, then you will have to make up for the shortfall from your savings or from your salary.
- 4. The concentration of risk is very high. The location of the property is of paramount importance. After you had purchased your property, the area could be rezoned for rent control; or a new railway track could be built close to your property; or a main factory that provided

stable employment in the area could close down. In extreme cases, the place could become a ghost town like 'Radiator Springs' in the 'Cars' movie². The location risk is by far the greatest of all risks inherent in (investing in) real-estate properties.

- 5. Even though real-estate assets act as a good hedge against inflation, the same logic may not apply for all the countries. Countries facing decreasing or ageing population with tight immigration rules are more likely to suffer long-term decline in real-estate prices.
- Even countries with small land mass can increase land area by stepping-up reclamation work and by constructing high-rise buildings. Too many such buildings will result in oversupply causing the realestate prices to fall.

In general, the world population has been consistently growing, but the world itself is not expanding. In fact, the available land is shrinking due to rising sea levels. So, in the long run the real-estate prices must increase. My mother is a strong advocate of this belief and would never let us sell a property. To her, buying property has always been a one-way street. In India, until two decades ago, common people could not use mortgage loans. Properties were always bought for cash; thus they were pure assets with no liabilities. So, people were not really concerned about short-term price fluctuations so much, as they *know* for sure, the prices will eventually head up in the long term. In any case, they could always leave their properties behind as inheritance to the next generation; after all there are no estate taxes³ to worry about!

A couple of years ago, during a visit to India, I argued with a few of my relatives that imposing even a 5% estate tax will go a long way in preventing people from hoarding wealth for generations. I cannot forget the sulking look I received in return from them; they looked at me as though I came from another planet. My simple idea is, that the estate tax could help re-distribute wealth in a country where more than a quarter of the people are living in dire situations. According to the World Bank website⁴, in 2010, 32.7% of Indian population subsists on less than USD 1.25 per day. Moreover, estate duties can help to reduce the vast inequalities between the rich and poor in terms of income and wealth. After all, the estate taxes are levied on a dead man's assets and how can the *dead feel the pains* of additional tax?

6. Real Estate Investment Trusts (REITs)

Investing in REITs is an indirect way of getting exposure to real estate properties. REITs are investment trusts similar to mutual funds, set-up to invest exclusively in real estate properties. The trusts issue 'units' (similar to shares) typically in the form of Initial Public Offers (IPOs) and the units are then traded in a national stock exchange. There are many different types of REITs based primarily on the types of properties they own and lease out. Some of them own commercial properties while some own industrial properties and so on. REITs offer an excellent way to invest in commercial real estate properties, such as shopping malls, office buildings, industrial buildings, warehouses, hospitality, and apartment buildings. Without REITs, a normal retail investor cannot hope to participate in such bigticket real estate investments.

REITs are managed by professional management teams, which are responsible for day-to-day operations such as leasing out the properties, collecting rents, maintaining (and improvising) the properties and also for growing the asset base. The rents collected from the lessees form the income portion of the trust; and after deducting the expenses at least 90% of its taxable income must be distributed⁵ to the unit holders.

Investing in REITs has features of both direct real estate investments and stock investments, some of which are listed below:

- 1. REITs provide exposure to real estate with in-built diversification compared to direct investment in real estate.
- 2. Investing in REITs does not involve in any leverage on the part of the investor (unless you use margin account for trading) whereas in a direct real estate investment leverage is inherent. The REITs, as corporate entities, can use leverage by issuing corporate bonds or by taking bank loans.
- 3. REITs can raise new funds by offering new or rights units; this aspect is similar to stocks and may involve in unit dilution.
- 4. As the law mandates distribution of at least 90% of the net income to the unit holders, it generates regular cash flow, resulting in higher distribution yields compared to stock investments.
- 5. The income generated by the REITs is primarily from the rents; the quarter-to-quarter variations are less, therefore the income is generally stable compared to stock investments.
- 6. REITs require well compensated professional managements whereas the direct real estate investment can be managed by the investor directly.
- 7. As the units of REITs are traded in the national stock exchanges, the observed volatility of the prices is high compared to direct real estate investments. Further the prices are vulnerable to irrational investor behavior due to broader market sentiments. This would be a big disadvantage in using REITs. The REITs prices have high correlation to the stock market movements.
- 8. REITs offer high liquidity; if an investor wants to divest his/her investment, it can be done fairly easily at the touch of a mouse-click; it is not so fast with direct real estate investments. It involves in engaging property agents, negotiations with the prospective buyers and paper work etc.,

Ignorance is bliss! The prices of the REITS are available throughout the market hours of the stock market. While this is generally good, the availability of the prices can cause harm by increasing observed volatility of the REIT prices. Over-night drop in Dow Jones Industrial Average (DJIA) in the United

States can affect the REIT prices in far-away Singapore. Thus the correlation of REIT prices with the stock indices is quite high. This is in stark contrast to the low volatility of prices of the underlying real-estate assets. Real estate prices are not easy to get; in any case you can never obtain day-to-day, hour-to-hour and minute-to-minute prices of the real-estate properties. This unavailability of prices (ignorance) provides short-term stability of real-estate prices, leading to low volatility (bliss).

7. Comparison between Direct Real Estate, REITs and Stocks

A table of comparison between direct real estate investments, REITs and stock investments is provided below to serve as a ready reference.

Sr. No.	Feature	Stock Investments	REITs	Direct Real Estate
1	Business	Varied sectors & industries	Real estate	Real estate
2	Source of Income	Business of selling products and ser- vices for profit	Rental income and capital gains from properties	Rental income and capital gains from properties
3	Regular income	Management retains control over payment of dividends. Usually dividend yields are low	Minimum 90% of net income paid out as distributions	Rents minus ex- penses
4	Use of Lever- age at investor level	No. Unless margin account is used	No. Unless margin account is used	Yes. Mortgage loan
5	Income vari- ability	High	Low	Low
6	Diversification	Depends on the company	High	Low. Risk is highly concentrated
7	Market Prices Availability	Available during market hours	Available during market hours	Not easy to get market prices
8	Market Price Volatility	Market prices avail- able during market hours, so high volatil- ity	Market prices available during market hours, so high volatil- ity	Low
9	Liquidity (abil- ity to quickly make invest- ments and divestments)	Investment and divestments can be done throughout the market hours.	Investment and divestments can be done throughout the market hours.	Low. It can take weeks to months to buy or sell a property

Table 4.2 Comparison between Direct real estate, REITs and Stocks

10	Management	Professional manage- ment is required	Professional management is required	Usually managed by investors them- selves; can also be handled by real estate agencies
11	Fees and Expenses at investor level	Brokerage fees will apply	Brokerage fees will apply	High due to pay- ments of commis- sions to real estate agents, legal, con- veyancing, survey, stamp duty etc.,

8. Speculation in Financial Markets and Gambling

Many investors use part of their investible assets for speculation in stock markets and for gambling. There is really no difference between these two activities; hence both are being addressed under the same topic. The gambling instinct is an inborn trait in almost all human beings. The way in which people express this quality may be quite different; some people frequent to black jack tables while others are content with the slot machines. Some people buy Lotto tickets while others bet at the racecourses. Some people bet on sports outcomes while others take more direct involvement by playing card games. I know of a friend who, while not playing any card games himself, would bet on other players, thereby making the whole game more interesting for everyone. There are many social get-togethers, where a part of the entrance fees is used as prize monies for games like Tombola.

Betting takes place in almost all major sports; where it is legal the government gets to share the spoils and where it is illegal the government must spend money in enforcement activities without getting anything in return. So, smarter governments make the betting legal. I am not here to argue whether it is right or wrong, moral or immoral to indulge in speculation or gambling activities. I am thoroughly convinced that it is merely an inherent part of the human nature and therefore must be given a proper and regular outlet. If proper outlets are not provided, it will seek expression via improper outlets. It is really that simple.

The activities mentioned above, even though gambling in nature, can also be called as games because they provide some form of entertainment and excitement for the participants. So, these activities hang delicately between 'games' and 'gambling'. What can tilt the balance are the amount of quality entertainment derived from the activity and the stakes involved. For example, if you paid USD 20 and played the game 'Tombola' for an hour in a party and lost it, can it be called as gambling? The amount of entertainment and networking you would have enjoyed would more than offset the financial loss of USD 20. So, this would come well within the range of the definition of 'games'.

On the other hand, if you had bet and lost USD 1000 in a horserace and the race only lasted for less than a minute, can it be called as a 'game'? The stakes in this case far outweigh the entertainment derived and therefore must be called as 'gambling'. Well then, when would losing USD 1000 in a horserace be considered as a game? The answer is 'never' for the regular salaried retail investors; 'may be yes' for the ultra rich, but then I have not written this book for them. The commercial operators of casinos always call this activity as 'gaming' because it is so for them; the odds are in their favor; house always wins!

We exhibit our tendencies and inclinations to engage in speculation in varied degrees. Some people go out of their way looking for pure gambling activities and you can find them in the racecourses, casinos and other gambling dens. There is another group of people who never get involved in any type of gambling activities. We are least concerned about these two categories of people, because they are not likely to use the financial markets for gambling. But there is a third group of people whose speculative nature is so subtle and deeply seated, that they may not even be aware of their true nature for most part of their lives. However, when they come across a right opportunity, their true speculative nature will emerge taking control of their actions. Stock markets present many wonderful opportunities for such individuals to engage in speculative activities. Usually, they will realize their true nature only after suffering substantial losses.

Why are we discussing all these in this book? The reason is simple. The burden of this topic is to make you aware that the speculative tendency is an inborn trait, which must be given a proper and regular mode of expression. Using the financial markets for these purposes is extremely costly; you may lose many nights' sleep. If you suspect that you even have a slight degree of speculative behavior, then I strongly recommend that you give yourself a budget for that and make a resolve never to exceed that budget. So, I thought it fit to consider gambling as an asset class and allocate money for it! Asset allocation for gambling and speculation in financial markets? Absolutely!

To Summarize...

- 1. In addition to the credit (default) risk, bonds also possess many other risks; even risk-free Government bonds are affected by such risks.
- 2. In a bankruptcy proceeding of a company, the bondholders (debt) are paid first before the company can pay anything to the common stock holders. So, investing in common stock is more risky than investing in bonds.
- 3. Preferred stocks have features of both stocks and bonds.
- 4. The primary difference between the preferred stocks and bonds is the *timing* of repayment of the principal and of the preferred dividends.
- 5. Real estate investments are ideally suited for working class people because of their ability to service the mortgage loans from their regular employment income, inherent leverage and low volatility of prices compared to stocks and bonds.
- 6. Investing in REITs is an indirect way of getting exposure to real estate properties.

- 7. The prices of the REITS are available throughout the market hours of the stock market. The availability of the prices causes harm by increasing volatility of the REIT prices compared to direct real estate investments.
- 8. The speculative tendency is a natural behavior in all human beings and the financial markets provide ample opportunities to unleash that behavior. Using the financial markets for these purposes is extremely costly; you may lose many nights' sleep.
- 9. I strongly recommend for an asset allocation for gambling and speculation in financial markets.

5. Non-Traditional Asset Classes (Commodities, Currencies and Derivatives)

While identifying short-term opportunities is difficult for retail investors, knowing the long-term trend is not too difficult. If you pay a little attention to your monthly expenses, you can get the big picture on commodities.

1. Commodities

If this book were written 10 years ago, this section on commodities would not have been there. Investing in commodities was not popular then; not for the retail investors anyway. Only the professionals, futures traders and hedgers traded commodities. The exception of course, was investing in physical gold by Indian households, which has been going on for several hundred years and still not showing any signs of abating. So, what has changed?

In the last two decades, a couple of billion people from the developing nations have seen their disposable income go through their roofs, directly increasing consumption. The supplies could not catch up with this spiking demand. On top of that, the changes in climatic patterns during the last decade resulted in frequent crop failures resulting in undersupply of many commodities. During this period, while United States was fighting two wars, the US dollar began its steady decline in value leading to phenomenal increase in the prices of all commodities in US dollar terms. Suddenly the world had woken up to a whole new asset class—commodities. Moreover, with the availability of many Exchange Traded Funds (ETFs), investing in commodities became as easy as buying a stock in the stock market. That is why, this topic found its way in this book, written for retail investors.

Commodities can be divided into two categories viz., non-perishable and perishable. The non-perishable commodities are the benevolent gifts of the Mother Earth to mankind. All the metals and minerals, energy commodities such as coal and petroleum fall under this category. They are also called as *hard-commodities* and are usually mined. The perishable commodities are derived from the efforts of the farmers with due contribution from the earth and the sun. These are agricultural products, also known as *soft-commodities*. Unlike stocks or bonds, commodities are physical assets. If a company goes bankrupt, its stock may become worthless; you may lose the entire investment; but with commodities you will never go empty-handed.

As per basic economic theory, supply disruptions and increasing demand cause the prices to rise, whereas oversupply and the drop in demand cause the prices to fall. Although the interaction between supply and demand affects all the asset classes, their effects are felt far more acutely in the prices of softcommodities. In case of stocks, there is a way to calculate intrinsic value of stocks and you can know if the stock is over-valued or under-valued or fairly priced. If the price of a stock is too high, you may wait a year for the price to fall or you may even decide not to buy that stock at all. Moreover, there is no 'I must have this stock, now' type of situation.

But if the price of rice is too high, how long can you wait for it to fall? Or can you decide not to buy rice at all? You may temporarily make good with other grains like wheat, but not for long. So, even if the price is very high, you must still buy rice to satisfy your palate, causing the prices to go further up. Similarly, if the price of rice falls to an all-time low, will you buy too much of it and store for future? Again the answer is no, because you can't store them for too long. So, soft-commodity prices are affected greatly by the disparity between supply and demand. In reality however, the *expectations* of disparity causes the price movement well before the actual disparity itself.

The prices of hard-commodities (industrial metals) are also driven by disparity between supply and demand. The newly affluent people in the emerging markets such as Brazil, India, China etc., had put an enormous buying pressure on consumer products such as cars, household appliances etc., during the last decade resulting in phenomenal increase in the prices of steel, copper, lead etc., Increasing vehicle ownership in these countries has had a huge impact in crude oil prices. The crude oil prices are also particularly susceptible to supply disruptions; news from the Middle East or OPEC has the potential to cause spikes in oil prices. The short-term prices of oil are also affected by weather patterns; too cold a winter can cause the prices of heating oil to go up. The hurricanes over the Gulf of Mexico can have similar effects on crude oil as seen during the days of Hurricane Katrina.

Commodities and stock generally tread in opposite directions. Stated in the words of the commodities guru, Jim Rogers, 'Commodities tend to zig when the equity markets zag'. The reason for this can be very easily explained. Companies use commodities for producing their end products and not all of them can pass on the costs to the buyers. A utilities company for example, uses oil or coal to generate electricity. Rising oil (energy) prices will naturally raise costs thereby reduce profits, which means low stock prices. Similarly, any increase in the prices of food grains will affect the profitability of food companies, resulting in lower stock prices. For this reason, commodities can be seen as a hedge against a stock portfolio. Having said, such phenomenon can only be observed over a long time-horizon, under normal economic conditions; in the short-term however both commodities and stocks may move in unison, especially during abnormal economic conditions. If the economy is anemic, both stocks and commodities will suffer due to loss of demand and poor sentiment; similarly if the economy is growing rapidly (overheating), both stocks and commodities may do well together.

With this background on commodities let us try to answer this question, 'how can a working person (retail investor) invest in commodities?' I would like to remind myself the purpose of this book before attempting to answer this question. The purpose of this book is to provide time tested and sound ideas that can work safely forever for the working class retail investors. Even if you are working full time in an office as a manager or in a factory as an engineer, by following the ideas in this book, you must be able to invest safely. Suppose you like rice and you eat it daily; does that mean you are a rice expert? What knowledge is required to be sure of success in a rice investment? How do we know rice is under priced or over priced or fairly priced at any given point in time?

One thing is for sure, if you bought two tons of rice, it does not give you a regular income like a dividend or a coupon. You must spend some more money in storage, security and insurance. So, basically you can only hope for capital gains from your investment. But that is not all. You must sell your rice within a very short period of time, less than a year, because after that, a brand new produce of rice will hit the market and you may not be able to sell your rice at all. You may end up eating rice for three meals a day for a long time though! Instead of buying the physical rice, you can also buy it in the futures market. Even then you cannot be sure that the price of rice will go up after you had bought. A subsequent bumper harvest of rice can crash the prices, leaving you with huge losses.

As I see it, investing in *individual* commodities is extremely challenging for working class retail investors. It may be like bread and butter for professional traders, but not for you. Sorry to pour cold water, but it is the truth. A retail investor may not have the necessary time or skills to make use of short-term opportunities. In countries where capital gains are taxed, you must also share your occasional profits with the government. So, I strongly recommend against investing in individual commodities unless the nature of your day job allows you to monitor the supply disruptions and changes in demand of a commodity quickly enough to capitalize on mispricing. In this case, you will be considered an expert with respect to this commodity and not really a retail investor!

While identifying short-term opportunities are difficult for retail investors, knowing the long-term trend is not too difficult. If you pay a little attention to your monthly expenses, you can get the big picture on commodities. You don't have to be a commodity analyst to do this. As of writing this book, in 2011, it appears that the demand for commodities will remain higher than the supply during this decade putting an upward pressure on commodity prices in general. Some of the major factors for this are listed below:

- a. The purchasing power of many millions of people in the developing nations is on the rise, fueling consumption (sharp increase in demand).
- b. General increase in population (modest increase in demand).
- c. Changes in climatic patterns causing frequent crop failures (sharp supply disruptions).

- d. Volatile situation in the Middle East keeps the world on the edge (sharp supply disruptions of oil).
- e. The search for oil has moved to deep seas; almost all land based and shallow water based oil sources have been already found. Deep sea means more costs for future exploration.
- f. The same goes for the search of gold and other metals. The cost of extraction has been always on the rise.
- g. Due to the economic boom in many developing countries, the children of many farmers migrate to urban cities seeking employment in offices and factories. I can vouch for this phenomenon happening in small villages in India. (structural changes to supply).
- h. High US indebtedness resulting in weaker dollar. (measurement currency weakness).

Based on the above list, it appears that there is a strong case for the long-term investing in commodities. By using commodity Exchange Traded Funds (ETFs), you can invest in a group of commodities as against individual commodity. This method provides a good diversification, as the crash of a single commodity will not unduly affect your overall value. Since the prices of commodities and that of stock tread in opposite directions, allocating a small percentage, around 10% of your assets to commodity ETFs can actually act as a hedge to your traditional stock-bond portfolio.

2. Gold

Any discussion on commodities will be incomplete without a special mention on gold, for it has been the medium of exchange, store of value throughout history. It has been thought as a good hedge against inflation and economic disruptions. The shining yellow metal has always been sought after for jewelry and other ornaments since very early civilizations. But what is the merit of gold as an investment for a retail investor? To answer that question, we must look at the past performance of gold as an investment. The price of gold remained at USD 35 an ounce from 1935 through 1970. No change in price for 35 long years! Then it started its ascent hitting USD 850 an ounce in 1980, over 2400% increase in 10 years. Then started a bear market for gold that lasted for the next 20 years; between 1980 and 2000, gold lost over 70% of its value hovering around USD 270 an ounce in 2001. Then it started to glitter again. From the lows of USD 270 in 2001, it surpassed USD 1850 briefly in 2011. A 700% increase in value in 10 years.

As an investor you must always remember, once you buy gold it does not yield any returns (no dividends or coupons) unlike stock or bond investments. In fact you must spend more money to safeguard it. So, the investor is only after the capital gains realized on sale. As a commodity, prices of gold are also subjected to the same economic laws of supply and demand. The dramatic improvements in the standards of living of millions of Indians and Chinese have certainly caused the demand for gold to surge. Indians and Chinese have been the largest buyers of gold, year after year. The supply however, could not keep up with the pace of increasing demand, resulting in price increase in the early 2000s. As we had seen, this increase came after 20 years of intense down (bear) market for gold.

However, there is another bigger group of consumers, which make gold very unique—and that is the central banks. When the central banks buy or sell gold, they deal in terms of tons, not troy ounces. The Indian Government bought 200 metric tons of gold in 2009¹, presumably to diversify against the slumping dollars. It will not surprise anyone if China did the same; after all China has over USD 3 trillion in foreign exchange reserves². It makes more sense for China to diversify against the fall of US dollars, which is yet another reason for the expectation of gold prices to be on the uptrend. However, the presence of these big boys (central banks) in this arena makes investment in gold really unique and challenging. This is because the central banks may dump gold in large volumes just as readily when they see the signs of their risks abating.

The real question now is whether the gold rush is over or it is just the beginning. After the spectacular 10-year rally, is it time for gold to go napping like it did during the previous two lengthy periods? To answer this question, we must analyze and compare the events that may have caused gold prices to increase during the recent two 10-year periods 1971–1980 and 2001–2011.

Period 1971–1980

Vietnam war finally ends in 1973.

Oil Crisis in 1973 sparking off inflation.

A new term 'stagflation' coined to signify low growth and high inflation of the 70s.

Nixon resigns 1974. Double digit inflation in 1974–1975 and 1979–1981³. High unemployment rate from 3.4% in 1969 to 10.8% in 1982⁴.

Period 2001–2011

War in Afghanistan in 2001.

Invasion of Iraq in 2003.

Oil touches USD 140 a barrel in 2008⁵.

Fear of stagflation resurfaces in 2008⁶.

Global Financial Crisis—Bankruptcy of Lehman Brothers in 2008.

Unemployment hits 10% in 2009⁴.

Debt crisis in EU—started in late 2009 and is still unresolved at the time of writing this book.

In both the periods being discussed, there were effects of war, inflation due to high oil prices, slowing economic growth and rising unemployment. So, for the gold prices to continue rising from the current levels (of USD 1700 an ounce), similar risks *must persist in the future*. The risks on the horizon are Middle East oil, high US Debt levels and Sovereign Debt crisis in some European Union countries or even a threat of possible break-up of Euro. If these risks fade, the glitter of gold will also follow suit.

Considering the performance of gold over the last 100 years, the future prospects are *not* really encouraging from the point of view of working class retail investors. The prices of gold seem to be very active for a decade, only to fall asleep for a couple of decades afterwards. And it seems to respond only to large-scale negativity in the world; therefore it can be likened to an insurance policy. Actually it serves as a good hedge against high inflation, wars, acts of terrorism, economic turmoil etc.; but as soon as the world returns to its normalcy, people seem to forget gold. Do you even think of insurance when you are hale and healthy? And again looking at the historical gold prices, world tends to be spending longer periods at peace than in turmoil.

Based on the above arguments, I am prompted to make the following statement. You must be a trader with skills to time the market or you must have a time horizon of over 30 years to be assured of success in gold investments. There is no halfway compromise. With such a long time horizon, you cannot afford to have a large part of your wealth invested in gold. So, when an Indian bride wears a long gold necklace, she hopes to wear it till her death! Obviously her investment horizon is far more than 30 years, which is a necessity for success in gold investments. If your time horizon is less or you intend to invest a larger (more than 5%) portion of your wealth, then your gold investment can be anything but safe!

3. Forex

Foreign Exchange (Forex) market can be imagined as a computerized moneychanger operated by people in suits. A visit to the local moneychanger is usually due before we setout on a trip to a foreign country. The intention is to buy the foreign currency and pay for it with our local currency. Assuming your local currency is USD and you would like to travel to France, you must buy the Euros and pay for it using your US dollars. The following quote illustrates the bid/ask notation for Euro/US Dollar currency pair.

EUR/USD: 1.2405/85

The bid price is 1.2405 and the ask price is 1.2485. In your case, you must pay USD 1248.50 (ask price 1.2485 multiplied by 1000) in order to buy 1000 Euros.

Let us say, you had only spent 800 Euros during your trip and you would like to convert the unspent Euros to US Dollars upon your return to the United States. If the quote remained at EUR/USD: 1.2405/85 when you returned from your trip, you will receive USD 248.10 (bid price 1.2405 multiplied by 200) for selling your excess 200 Euros, for which you had originally paid USD 249.70 (1.2485 multiplied by 200). The difference in the rate 0.0080 (ask price minus bid price) is known as the spread; in dollar terms the difference of USD 1.60 (USD 249.70 minus USD 248.10) represents the profit for the moneychanger in the transaction of buying and selling of 200 Euros. In Forex trading, the spread is expressed in terms of pips. For most currency pairs, 0.0001 is known as a pip.
Even though in the moneychanger example above, the spread was 0.0080 (80 pips) the forex markets offer much tighter spreads as low as 1 pip.

Forex quotes are unique in that they involve two currencies which can cause confusion in the beginning. In all other financial transactions there is only one currency. An ounce of gold costs USD 1,500; in this case, an ounce of gold is the commodity and USD is the currency of measurement (valuation). If a ton of rice costs EUR 400, it means, 1 ton of rice is the commodity and Euro is the currency of measurement. Similarly, if the common stock of Apple Inc (AAPL) costs USD 600, the common stock of Apple is the currency of measurement.

In the currency pair EUR/USD, the first currency, EUR is the commodity (base currency) and the second currency, USD is the currency of measurement (quote currency). In other words the value of the first currency is being expressed in terms of the second currency. Any transaction in forex is a combination of buying one currency and simultaneously selling another one. Even though it appears to be a unique feature in forex, it is not so. When we buy an ounce of gold for USD 1,500, this can be also viewed as buying 1 ounce of gold and simultaneously selling USD. Hence, forex is not much different from any other financial transactions except the usage of two currencies.

A forex trade is a contract between two parties. For every buyer, there must be a seller; in other words for every winner there must be a loser; it is also a zero-sum game. For a EUR/USD contract of size EUR 100,000, movement of 1 pip will result in a profit or loss of USD10. For a mini contract (EUR 10,000), movement of 1 pip will result in a profit or loss of USD 1. Some forex brokers offer leverage of even 50:1 for major currency pairs; with such a high leverage one can trade a 100K contract with an initial outlay of as little as 2K. It must not be forgotten that leverage is a double-edged knife as it magnifies both gains and losses.

Forex is one of the most liquid markets in the world with a daily turnover of over 4 trillion dollars⁷. The forex markets operate 24 hours from Monday morning in Sydney to Friday Evening in New York. Forex is an 'over-the-counter' (OTC) market, and is not conducted in a physical location such as a stock exchange. Economic data is the major driver for the currencies of the world. As the market is operating 24 hours, the economic news spewed by various government agencies at various time zones have profound, and at times volatile effects on the values of the currencies. All major broking houses generally send their clients the weekly economic calendars (on Monday mornings), which typically has over 40 events in a single week; some of them are major while many of them are minor; nevertheless all are expected to have some impact or else they won't be in the list.

Unless you are an economist yourself, it is not easy to understand the impact of the news on a currency pair. By the time you understand the significance, the market would have already moved and you would have lost some opportunities. Furthermore, many of the events may occur during office hours when you are busy at work; even if you have the ability to understand the significance of the news, you may not be in a position to receive the news on time. This makes forex trading very challenging for the working people for whose benefit this book has been written. Then you might ask, why is this subject included in this book. There are two reasons why forex is covered in this book viz 1. Forex brokers as moneychangers 2. To hedge the future currency risk. We will discuss them in detail below.

- 1. Forex brokers as moneychangers: The spreads offered by the forex brokers are usually much narrower than that offered by banks and moneychangers. If you are sending money for funding the overseas education of your children, for buying properties abroad etc., you might be able to save some cash by making use of such unconventional channels. However, you must atleast verify that the forex broker is registered with the local regulatory agency e.g. NFA, CFTC in the USA, FSA in the UK, MAS in Singapore etc., If you can't find any broker who is registered with your local regulatory agency, then you had better stuck with your local banks or other conventional methods for your transactions.
- To hedge the future currency risk: This method is useful for both 2. individuals and for corporations. Let us assume your daughter is studying in the UK and you must pay the tuition fees of £40,000 in three months time. The current exchange rate is GBP/USD:1.5452/55. Based on the current exchange rate, to buy the required sterling pounds you will need (1.5455 multiplied by 40000) USD 61,820. You don't have the cash right now, but you are confident that you will have the required amount in three months time when the payment is due. But, you are worried about the possible appreciation of sterling pounds against US dollars. In this scenario, you can hedge against the appreciation of pounds by using forex trading, which acts like an insurance policy to protect your asset from appreciating Sterling pounds. The hedging strategy helps you to reduce future currency risk. As with all insurance policies there is a price to be paid that is usually low compared to the benefits offered.

However, there is also a catch; what if the Sterling pounds instead of appreciating actually depreciated against US dollars in three months time. In this case, you will certainly kick yourself, because if you had done nothing you would have fared much better. Hence, I recommend that you limit the hedging to say, (arbitrarily) 50%; instead of hedging the full amount of £40,000 if you only hedge £20,000 you will come out of it smiling, however the outcome turns out to be.

Companies that have operations in many countries can also make use of the 50% hedging of receivable assets (with fair degree of certainty) so that they don't periodically disappoint market with large forex losses. If a company reports foreign currency gains, the management can't take much credit for the gains; it is just plain luck; but if they report huge currency losses they have only themselves

to blame for not hedging their risk adequately. The results of their hard work, with otherwise sound operating results, will forever be subject to the whims and fancies of the currency fluctuations.

4. Derivatives—Good, Bad and Ugly

Derivatives are financial instruments whose values are based on one or more underlying assets. The most common types of derivatives are forwards, futures and options. The common perception is that the derivatives are high-risk investments and are only suitable for professionals and high risk-seekers. By extension, for a man on the street, the retail investor, the derivatives may not be suitable. As this book is written primarily for the retail investors, why bother to cover them anyway? The derivatives are simply tools that have two sharp edges; it is the investor who makes them into scissors (safe) or a double-edged sword (risk). You cannot blame the sharp edges; you can only blame yourselves if you had used them as a double-edged sword. This subject had been included in this book primarily to warn the retail investors of double-edged sword type use of derivatives.

The subject of derivatives is the most misunderstood of all investment types. For any disaster, the top place in the Hall of Blame is reserved for the derivatives. The derivatives products related to the sub-prime mortgages are often cited as the main culprit behind the global financial crisis of 2008. The truth is far from what is made out to be in the media. As stated earlier, it was not the derivatives *per se*, that were faulty; but the inappropriate use of them that may have caused the crisis. It is like blaming your kitchen knife for cutting your finger! We will discuss in this book three different ways of using the derivative products namely, good, bad, and ugly.

a. Derivatives for Hedging—Good

Assume you are a farmer, growing cotton in a leased land and the harvest is due in two months time. The current market price (spot price) of cotton is USD 1.95. But you are worried 'what if the prices drop in two months time?'. So, when you received an offer from a nearby cotton mill owner for your cotton at USD 1.97, you accept the offer gladly. By entering into this deal, you have locked your selling price and therefore your profits. And you never have to worry about the prices of cotton anymore.

The cotton mill owner on the other hand, has the risk of 'prices rising in two months time'. By entering into this deal the mill owner has locked her buying price and therefore her profits. This is essentially a two-months 'forward contract' of cotton. You have taken a 'SHORT' (sell) position and the mill owner has taken a 'LONG' (buy) position in the forward contract.

The motive for YOU to accept the offer is that:

□ You will have the commodity that you *must sell* in two months; you DO NOT know the price (of the commodity) then.

- □ You do not like to worry about the prices of cotton during the next two months. The contract allows you to sleep peacefully at night having locked-in your profits.
- □ So, essentially you have a bought an insurance against *drop* in prices in future.

The motive for the MILL OWNER can be summarized as below:

- □ The mill owner requires cotton supply in two months time; she DOES NOT know the price of cotton then.
- □ She has ensured supply of cotton for the mill at a reasonable cost and locked-in the mill's profits.
- □ The mill owner has bought an insurance against *increase* in prices in future.

This is actually a *win-win* situation for both the parties involved; both are hedging away their risks ensuring minimum required profitability for their operations.

Now, two months later, if the current market price has increased to USD 2, you have lost out on the deal because you have lost the opportunity of selling your cotton at the current higher price; but the mill owner has gained because if she had not made the deal, she could be paying USD 0.03 more. On the other hand, if the cotton price drops to USD 1.90 in two month's time, you have gained because if you had not made the deal, you must sell the cotton for USD 0.07 lower; however the mill owner lost out on the deal, because she lost the opportunity of buying cotton at the current lower price.

Regardless of the final outcome, the deal is still considered win-win as it removed the uncertainties for both the mill owner and yourself. Both parties have used derivatives as insurance policies against unforeseen, undesired events or circumstances. This is the 'scissor type' use of the derivatives. If you analyze the motives & behavior of both the parties involved, you will understand that both are *not seeking* additional risks, but actually reducing them. However, there are still some risks in such type of forward contracts, mainly the counter-party risk. In spite of entering into the contract, the risk of one party (usually the loser) not honoring its obligations is known as counter-party default risk. Moreover, terminating a forward contract before the expiry is quite difficult, as it requires the concurrence of the other party also.

Futures contracts effectively address these two issues effectively. Futures contracts work in the same way as forward contracts, except that futures contracts are standardized and that the futures exchange acts as the counter party, removing the counter-party default risk. Moreover, it is very easy to terminate a futures contract simply by performing an offsetting action; *short* the same contract if you are *long* and *long* the same contract if you are *short*.

If you are a hedger, entering into derivative contracts is simply equivalent to buying an insurance policy. The airlines companies hedge the increase of aviation oil by entering into derivative contracts; on the other hand the oil producers hedge the fall in oil prices by entering into the derivative contracts. This type of hedging therefore is the primary purpose of the derivatives.

b. Derivatives for Speculating-Bad

Now, assume that you are NOT in the business of cotton production; but you have some idea about the prices of cotton and you have entered into the same forward (or futures) contract with the mill owner to sell cotton in two month's time at USD 1.97 per pound. You are acting as a speculator in this case because you do not have the cotton backing up your trade. In this case, the mill owner is still a hedger as she is trying to limit the losses if the prices of cotton were to increase in two months time. So, the mill owner has essentially *bought an insurance policy from you*. But, by entering into this contract, actually you have acted as the *seller* of the insurance policy; worse still, *you have not even collected a premium!* This is the speculative (bad) use of derivatives and it is risky for working class retail investors. You have entered into a derivatives contract with nothing to hedge against, therefore a pure speculator.

c. Hedgers become Speculators-Ugly

What happens when the hedgers resort to speculation? Consider this example: A major oil exploration company, that spends billions of dollars in oil exploration, is genuinely concerned about falling oil prices in future. So, the company engages in selling oil futures contracts to lock-in its selling price. Having locked-in the selling price, the company need not worry about the future oil price because it has hedged its risk of falling oil prices and thus ensured certain profitability for the company regardless of the final selling price.

But what if the oil exploration company *buys* oil futures contracts instead of selling them? If the price goes up it will gain from its own oil production and also its positions in the futures contracts. On the other hand, if the prices fall it will lose from both its own oil production and also on its futures contracts. This is clearly speculation because company exposes itself to additional risk. (You might say, what if the oil company also has some refining operations? Then the company is justified to *buy* futures contracts to hedge against the increase of oil prices only to the extent of its refining capacity).

Banks are also known to engage in derivatives trading of financial instruments for not only to hedge their exposure but also to do speculation. History has shown that a single trading desk is capable of bringing down huge banks within a short span of time by engaging in speculation. After all, banks have a big role to play in any modern economy. They are expected to act as middlemen for their clients. Along the way if they picked up any risk, they can always enter into financial markets to hedge their positions i.e. to reduce their risk. But if the banks use their enormous access to cheap capital to engage in taking speculative positions, then once in a while some of them will promptly checkout of business, like Barings PLC, Lehman Bros etc.

With this background let me come to the point I am trying to make. If an individual investor resorts to speculation, it will affect only his or her family. If

a large corporation does, it would affect its shareholders, suppliers, employees and their families; their actions will affect a larger community. But if banks and financial institutions engage in speculative activities, the consequences could be far reaching. The reckless speculation of banks can even affect the financial stability of the entire world as witnessed during the Global Financial Crisis. This, then is the *ugly* use of the derivatives.

The derivatives genie is now well out of the bottle, and these instruments will almost certainly multiply in variety and number until some event makes their toxicity clear ... In our view, however, derivatives are financial weapons of mass destruction, carrying dangers that, while now latent, are potentially lethal.

Warren E Buffett

Berkshire Chairman's Letter -2002⁸

Warren had been spot on with his prediction about the toxicity of the derivative instruments, full five years before 'the event', which brought the entire financial system into a grinding halt in 2008.

When we take mortgage loans from the banks, we are required to put up only a fraction of the cost to gain control of the property. We get to enjoy the gains and suffer losses from our property investments. The banks on the otherhand, in spite of coming up with most of the capital, don't get to control the property nor do they get to enjoy its upsides or downsides. They appear to be quite *content* with the interest income from the loans in spite of coming up with most of the capital. But, *what if* the banks become interested in sharing the upsides and downsides of the properties in proportion to their contribution and *forego* their mortgage *interest income completely*? If you think it is a crazy idea, how about the banks using their cheap capital for reckless speculation?

Stated in the words of Prof Simon Johnson, MIT Sloan School of Management, in a Testimony submitted to the US House Financial Services Committee, 'When things go well, the benefits of these arrangements are garnered by the executives who run these firms (and perhaps shareholders)'. When things go badly, the downside costs are pushed in various ways onto the taxpayers and all citizens.⁹ J.Paul Getty, Founder of Getty Oil Co. had famously said, 'If you owe the bank USD 100 that's your problem. If you owe the bank USD 100 million, that's the bank's problem'. Borrowing his words, if a big bank lost USD 10 million that's the bank's problem; if it had lost USD 10 billion, that's the taxpayer's problem!

5. Options and Warrants

Options are also derivative products, values of which change based on the price movements of the underlying assets. The underlying assets could be stocks of public listed companies, index futures, currencies, bonds, interest rates etc., The *buyer* of the option contract has the *right*, but not the obligation, to engage in the transaction, while the *seller* has the *obligation* to fulfill the transaction. An option

contract must have an exercise price (strike price) and an expiration date. The price you pay for the option is known as the option premium.

Let us look at a day-to-day example to understand this concept better. Assume you were looking to buy a property. You liked a particular house; negotiated and agreed at USD 150K. The owner demands a down payment of USD 5K and says you must complete the deal in two months time. You agreed and paid the down payment. This is a classic example of an option and the down payment is the option premium. Basically, you had purchased an option (by paying USD 5K) to buy the house for USD 150K in two months time. This option is your right and not the obligation for you. On the other hand, it is an obligation for the owner of the house to sell the property because he had sold you the option by taking the down payment.

Suppose, the price of the house rises to USD 180K within the stipulated two months, your option is now worth USD 30K (USD 180K minus USD 150K). You will exercise your right to buy the property within the two months time by paying the balance amount of USD 145K. But if the price of the house falls to USD 120K, you will choose not to buy the house paying USD 150K when you can buy a similar one for USD 120K. Then your down payment of USD 5K will be forfeited and your option will expire worthless.

Options on stocks work in the similar way except for one major difference. In the above example, the down payment of USD 5K will be offset against the purchase amount; you are required to pay only USD 145K (USD 150K minus USD 5K) to close the deal within two months. But in the options market, the money you pay to buy the options will not be offset against the purchase price when you exercise your options. There are two types of options (1) call options and (2) put options.

a. Call Option

The down payment for house discussed above is an example of a call option. A call option gives the buyer the right (not the obligation) to buy a fixed number of shares (usually 100 per contract) at a fixed price within a certain date, known as the expiration date.

Let us take an example of a call option on Procter & Gamble at a strike price of USD 68 selling at USD 2 (option premium) expiring in one month's time. The underlying stock is Procter & Gamble (PG), which is trading at USD 68. For buying this call option contract you will need to come up only with USD 2.* 100 = USD 200. If you were to buy 100 numbers of the underlying company's (Procter & Gamble) shares your capital outlay would be USD 68 * 100 = USD 6800 which is much greater than the USD 200 exposure on options.

If within the next month, Procter & Gamble's share price were to increase to USD 74, then you would be able to make a gain of (USD 74 minus USD 68) * 100 = USD 600 with a small exposure of only USD 200. Your Return on investment (ROI) will be a whopping 300% in one month. If on the other hand, the stock price did not go up above USD 68 (or went down), then the options will expire worthless and you would have lost the entire USD 200 investment.

b. Put Option

A *put* option gives the buyer the right (not the obligation) to *sell* a fixed number of shares (usually 100 per contract) at a fixed price within a certain date, known as the expiration date.

Let us take an example of a put option on Procter & Gamble at a strike price of USD 68 selling at USD 2 expiring in one month's time. The underlying stock is Procter & Gamble (PG), which is trading at USD 68. For buying this put option contract you will need to come up only with USD 2 * 100 =USD 200.

If within the next month, Procter & Gamble's share price were to drop to USD 64, then you would be able to make a gain of (USD 68 minus USD 64) * 100 = USD 400. If on the other hand, the stock price did not go down below USD 68 (or went up), then the options will expire worthless and you would have lost the entire USD 200 investment.

c. Hedging Strategies

As with all derivatives, you can use options both for hedging and for speculation. In this book however, we will discuss only the methods of using options for hedging purposes.

- Buy Call (go long) Options: Assume your bonus of about USD 10,000 1. is due within a month and you intend to invest half of it (USD 5,000) in stocks. You have analyzed the prospective company and decided that the intrinsic value is USD 55/share. You find the share price has been hovering around USD 50, which appears to you as a safe buy. But, you have no money to buy the stock now and you are worried that the prices may shoot up within the month. Let us say, there is a call option that expires in a month from now, with the exercise price of USD 50 selling for USD 1.10 per option. You may buy this call option knowing very well that you will buy your shares by exercising the options when you get your bonus within the month. If the stock jumps to USD 55, you still have the right to buy them at USD 50; if however, the stock drops to USD 45, you can simply buy the stock from the open market at USD 45 and let your options expire worthless. What you have essentially done is that you have limited your maximum purchase price to USD 51.10 (USD 50 + USD 1.10) regardless of what happened to the share price. This is like buying an insurance, for which you had paid USD 1.10 as the premium, the price of the option.
- 2. Sell Call (go short) Options: Let us say you have 100 shares of a company that is selling for USD 85/share. You don't expect your stock to go above USD 95/share; even if it did, you are ready to sell the stock happily at USD 95 (you think the stock is overvalued at USD 95). Let us say, there is a call option that expires in a month from now with the exercise price of USD 95, selling for USD 0.50 per option. In this scenario, you may sell this call option and collect the premium.

If the stock did in fact jump to above USD 95 during the month, you are obligated to sell your stock at USD 95 to the buyer of the call option. But, since you are anyway happy to sell your stock at USD 95, you will not be overly worried. But, if the stock didn't go above USD 95, then the option you had sold will expire worthless and you can pocket your USD 0.50 (option premium) happily. This is a great way of *creating* your own *dividends* from your stocks.

Buy Put (go long) Options: Let us say you have 100 shares of a 3. company that is selling for USD 60/share. It is approaching earnings season when companies report their quarterly earnings and you are not sure if the company can meet analyst's expectations. If it didn't, you know the share price will take a hit and you want to protect your position. But you really do not wish to sell your shares as you are keeping them for long-term. You merely want to protect your position if the price of your shares were to drop below USD 57. Let us say, there is a put option that expires in a month from now (covering the earnings season) with the exercise price of USD 57 selling for USD 0.70 per option. In this scenario, you can buy this put option paying USD 0.70 per option. If the stock stayed above USD 57, your option will expire worthless. However, if the stock dropped to lower than USD 57, then the gains from your options will offset your loses on your shares. By paying USD 0.70 for your options, you have limited your losses on your shares, a form of insurance.

d. Structured Warrants

While on the subject of options, it is beneficial to touch base upon another similar product known as structured warrants. Like options, structured warrants also have underlying assets, calls & puts, exercise prices, expiration dates etc., Structured warrants also behave similar to options, so I thought of listing only the major differences between them.

- 1. Options can be American type (can exercise anytime), European type (can exercise only on expiration) or Bermudan type (can exercise on a set number of times). Structured warrants are European type only.
- 2. You can short (sell) options, whereas you cannot short structured warrants. So, some of the hedging methods discussed above may not be possible with structured warrants.
- 3. The options are traded between two investors in an options/stock exchange using standardized contracts; whereas structured warrants are traded between the issuing bank and the investor in a stock exchange. When you are buying warrants, the issuing bank is selling them to you; and when you sell them, the issuing bank will be buying them from you. For this reason, I find structured warrants riskier than options for speculators because, they are up against *issuing bank's computers* and not their fellow investors' skills as in the case of options.

Computers work based on preset rules and are not prone to behavior biases as in the case of human investors.

Using options or structured warrants for speculation can be extremely dangerous for the working people. If you are a speculator, then you have nothing to hedge; you are not reducing any of your risks. May be you are selling insurance to the people taking opposite positions without collecting any premium! Let us assume, you do not intend to buy the underlying shares in a company; but you only bought some call options, thinking that the price will go up. Options always have expiration date and if the prices did not go up within the expiration date, your options will expire worthless. The prices could go up the next day after the expiration date, as you have no control over the stock market.

You may be right in predicting the direction of the stock, but that won't make you any money, because timing must also be correct. *Speculating in options relies on your superior ability to know both the direction and the timing of the stock movement.* For a working person, this is far too much to ask. As a general rule of thumb, use of derivatives must let you sleep peacefully. You can do that only if you use them for hedging to reduce or transfer some of your risks to others. If you are losing your sleep over a derivative position, then you may be taking the role of the speculator or of a professional trader and you have been adequately warned.

To Summarize...

- 1. Availability of many Exchange Traded Funds (ETFs) made investing in commodities possible for everyone.
- Commodities and stocks tread in opposite directions. So, having some exposure to commodity ETFs can actually act as a hedge to your stock portfolio.
- 3. Gold seems to respond to large-scale negativity in the world, therefore can be likened to an insurance policy. It is also a natural hedge against inflation.
- 4. Central banks are large investors in gold, which makes investing in gold extremely challenging.
- 5. You must be a trader with skills to time the market or you must have a time horizon of over 30 years to be assured of success in gold investments. If your time horizon is less or you intend to invest a larger (than 5%) portion of your wealth, then your gold investment can be anything but safe!
- 6. Derivatives are simply tools that have two sharp edges; it is the investor who makes them into scissors (safe) or a double-edged sword (risk).
- 7. When the derivatives are used for hedging, it is the good use; when used for speculation it is the bad use; when the hedgers use them for speculation it is the ugly use of derivatives.

- 8. Options are derivative products, values of which change based on the price movements of the underlying assets.
- 9. A *call* option gives the buyer the right (not the obligation) to *buy* a fixed number of shares (usually 100 per contract) at a fixed price within a certain date, known as the expiration date.
- 10. A *put* option gives the buyer the right (not the obligation) to sell a fixed number of shares (usually 100 per contract) at a fixed price within a certain date, known as the expiration date.
- 11. Investing in options & warrants as a speculator relies on your superior ability to predict both the direction and the timing of the stock movement.
- 12. The spreads offered by the forex brokers are usually much tighter than that offered by banks and moneychangers.
- 13. Future currency risk can be adequately hedged by using forex transactions. 100% hedging removes the currency risk; but if the currency moves in the opposite direction, you may think you would have been better off without undertaking hedging. So, 50% hedging method offers a worry-free system of hedging your assets; you will come out happier in any case.

6. Common Stock Investing

(Being a Business Partner)

Buy a business, don't rent stocks.

Warren E Buffett

1. Why Invest in Stocks?

It is a well-known fact that most self-made millionaires became rich by founding, co-founding or owning a part of a business enterprise/s. It is also true that most salaried people have secret desires to start their own company to become wealthy and independent. It is a tragedy that the vast majority of people who harbor such ideas get nowhere close to starting up their own companies. However, if an established successful business enterprise becomes available for sale, then most of us would love to have a bite of that success, if the price is reasonable. Ability to participate in a good business and to leverage on the strengths of great businessmen and their business processes, without actually having to spend time and energy trying to build our own, is by far the greatest advantage of investing in common stocks.

It is a dream come true for regular salaried people (who may be unable to venture out on their own due to their work commitments), as they have a chance to piggyback on some well-established proven entrepreneurs and their business systems. I can talk about the soundness of what is being said because of my own personal experience. A big part of my personal net worth can be attributed to the common shares owned by me in my previous company. I was fortunate enough to work for a company that had the share ownership program for the key employees. The actual returns in this case, cannot be told in terms of 20% or 30% but in terms of 20–30 times the original investment!

You may also find your own examples of rich people who had become wealthy either by founding or by owning a part of a successful enterprise. It is hard to find someone who had become rich by merely working for someone. Slogging one's way to riches is one long and dreary endeavor. People work and save for their entire lifetime trying to reach their financial goals only to realize that most of what they had saved had been lost to inflation; thus the purchasing power had not increased in any big way. So working for only a salary without any form of investing will not lead to riches; it may only give you an illusion of big savings with no real increase in the purchasing power.

Having established that investing in a business is the key to riches, we shall discuss some ways of going about doing it. This book is written for regular salaried people, so we will not discuss direct business ventures and partnerships. We will restrict our focus to only the *indirect* forms where company executives handle the day-to-day operations leaving the retail investors (readers) free to pursue their own careers. In other words, investors are not required to take any active role in the businesses of the companies in which they have invested. We will look at only two such indirect forms in this book; (1) common stock investing (2) angel investing.

2. Basics of Common Stocks

The common stock is a security that represents fractional ownership in a company. Assume that in a company there are 1,000,000 outstanding shares and you own 1,000 shares. It means you own 0.1% of the company. You are entitled to 0.1% of the earnings, dividends, voting rights etc. This ownership is perpetual; it means so long as the company is solvent, you will continue to own 0.1% of the company. After you pass away, the inheritors of your shares will continue to enjoy the same ownership in the company. Even when the company is dissolved, as a shareholder you are entitled to 0.1% of the net tangible assets.

Market capitalization (market cap) is a common metric that is used to measure up the size of listed companies. It can be calculated by multiplying the most recent share price with the number of outstanding common shares.

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Market Cap = Current Market Price * No. of shares outstanding
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For example, if the company's current share price is USD 22, then the market cap of the company is USD 22 million (USD 22 multiplied by 1 million)

As a part owner, you get to elect the board of directors who are responsible to run the affairs of the company by appointing the executives. Although, it is common for stocks to have the same percentage of voting rights, it may not necessarily be the case. For example, Google has two classes of shares viz., Class-A and Class-B shares; Class-A shareholders are entitled to standard 1 vote per share and Class-B shareholders are entitled to 10 votes per share. Class-A shares are for the general public and the Class-B shares are for the company's insiders; this dual structure allows the insiders to maintain control over the company. Such dual structure in companies however is not very common; most of the companies have 1 vote per 1 share system.

If the company wishes to raise capital by issuing additional shares, the investor will have the right to subscribe to 0.1% of the additional shares; the process of issuing these additional shares is known as 'Rights Issue'. So, if the investor subscribes to her 'rights shares' according to her entitlement then the original percentage of her stake (0.1%) will be maintained. If for some reason the investor failed to subscribe in full the 'rights shares', then her stake in the company will get diluted. More on 'Rights Issue' in a later chapter. The company can also raise capital by issuing preference shares or debt. If these instruments have conversion feature, i.e. convertible preference shares or convertible debentures or bonds, then there could be a possibility of *share dilution*. Further, when a company issues 'stock options' to its employees, there is also a potential

for share dilution. This issue of dilution brings us to two terms commonly found in Income Statements of companies viz Basic Earnings Per Share (Basic EPS) and Diluted Earnings Per Share (Diluted EPS).

a. Basic Earnings Per Share (Basic EPS)

The Basic EPS is calculated by dividing the total earnings for the year (or a quarter) by the total weighted average number of outstanding shares.

Basic EPS = Net Profits/Weighted average shares outstanding

The basic EPS will be provided in the Income Statement of a company and therefore you *need not calculate* this yourself.

b. Diluted Earnings Per Share (Diluted EPS)

The diluted EPS is calculated by dividing the total earnings for the year (or a quarter) by the sum of total weighted average number of outstanding shares and the weighted average number of the convertible instruments.

Diluted EPS = Net Profits/Weighted average shares outstanding + Weighted average number of convertibles

The convertibles referred to here are: employees stock options, warrants, convertible debt, convertible preference shares etc., The diluted EPS is a measurement of the company's EPS if all convertible instruments were exercised. The diluted EPS will be equal to the Basic EPS if there were no convertible instruments issued by the company and will be lower than the basic EPS if there are convertible instruments.

The diluted EPS will also be provided in the Income Statement of a company and therefore you *need not calculate* this yourself.

Notes

- 1. It must be noted however, that only the shareholders are entitled to the dividends, voting rights etc., and not the holders of convertible securities.
- 2. If the share price is lower than the exercise price of the convertibles, then the holders of the convertibles will not exercise; it makes no economic sense for them, as buying the shares in the open market will be cheaper than exercising the convertibles. In this case, the diluted EPS will be the same as the basic EPS, even though the company has outstanding convertibles.

3. The Business of Stock Investing

We had stated that the greatest advantage of investing in common stocks is the ability to participate in the growth prospects of a good business and to leverage on the strengths of great businessmen without actually having to spend time and energy trying to build and manage our own. However, there seems to be a *big disconnect* between the theoretical motive and the actual practice. We seem to

be forever mesmerized with the stock quotes on the computer terminals without ever bothering about the earning potential of the underlying businesses. In many instances, we stand ready to buy a company's stock at a mere suggestion (or tip) from a friend or colleague during coffee breaks. Even those of us who believe in the law of cause & effect for all worldly affairs fail to realize that the same law is also responsible for the movement of stock prices. The cause that drives the stock must obviously be the earnings prospects of the underlying business.

If a business does well, the stock eventually follows.

Warren E Buffett

However, we treat stock as if it is a lottery ticket with better odds (50:50) for success without realizing that the quantum of loss can be far higher in stock investments than in lottery tickets. Interestingly, the world's greatest investor Warren E Buffett is said to ask himself two questions before buying a stock that illustrates his approach to stock investing.

- 1. If I had the required money and ability to buy up the whole company, will I be happy doing so? If the answer is 'no', then I shouldn't buy even one share in the company.
- 2. Will I be perfectly happy to hold a stock if the market shuts down for the next ten years? If the answer is 'no' then don't own it for even 10 minutes

How many of us will dare to buy a stock if the market was closed for 10 years? We would be worried as hell, if the market closed for even 10 days! Using an example, we will now discuss the concept of investing in stock with a business perspective.

Cake Shop Illustration

Let us assume that a faint acquaintance of yours, a businessman, has offered a minority shareholding of 10% in his cake shop. He is doing so because he needs some urgent personal cash requirements. He has given you an assurance that the cake shop will be run by the current management team and your involvement is not necessary. You are to merely act as a 'sleeping partner' in the company.

What will be your thoughts when you receive an offer like this? How would you evaluate the offer? What information is required to decide one way or the other? How would you verify the information supplied by the owner? How will you gather additional information? Let us first see what information you would demand from the owner.

- 1. What is the number of average daily visitors to the shop? What is the average purchase per visitor?
- 2. What are the history of revenue, profits and cash flows?
- 3. What are the operating expenses? What are the fixed expenses like rental, salaries to employees etc?

- 4. What is the nature of capital expenses? How often the place must be renovated?
- 5. Is there any existing debt? What is the repayment schedule?
- 6. What are the supplier's credit terms?

Will you be satisfied with the information furnished by the owner? Absolutely not! You sure would dig deeper to understand more about the business.

- 1. You would visit the shop yourself. You will check if the place is attractively furnished to draw in customers.
- 2. You will see if the shop is facing the flow of human traffic.
- 3. You will become a customer yourself to taste some of the cakes and also to experience customer service first-hand.
- 4. You will also see if there are any other cake shops in the neighborhood. What is the competition like? You will also visit the competitor's cake shop to compare the taste and customer service.
- 5. And you will also ask your friends for their opinions on taste, product quality and customer service.
- 6. The list goes on and on ...

You will demand that all of the above (and even more) questions be answered to your utmost satisfaction. You will be amazed to realize at this point that none of the above questions involve the 'offer price' itself. All of the due diligences we have talked about are on the business processes and on the future prospects of the business. Only after you are thoroughly satisfied with the business aspects, you would think about the price aspect.

Warren's first question can now be rephrased for our 'cake shop' example as below. If you were not happy with the future prospects of the business, would you like to own 100% of the cake shop? If the answer is 'no', then you should not even buy 1% of the shop. The second question is not even applicable in this case, as there is no secondary market for transacting in the shares of the cake shop.

As you must have realized by now, the objective for buying common stock in a company is no different from the objective for buying a minority partnership in a 'cake shop'. Would you enter into a partnership in a 'cake shop' thinking at what price will you be able to sell your stake the next day or a week or a month? Absolutely not. The 'resale' value of the business may not even figure out in your evaluation, as you will have no idea when you will be selling your stake. You will be thinking only of future business prospects (earnings and dividends) and the purchase price.

Thus, if a chance to participate in a direct partnership is offered to an average retail investor, he/she would carry out thorough due diligence before making investment decision. However, the same person might make a common stock investment at a mere suggestion from a colleague or a broker, without doing any research at all. So, obviously people perceive the common stock investments and direct business partnerships completely differently. This phenomenon is very common among retail investors that it demands serious attention.

Note: The assumption here is that the offer comes from a distant contact; not a close friend or relative; because if such an offer comes from people very close to us, we may not do much research at all; the decision to invest may be an emotional one taken purely on social grounds. Since we are comparing common stock investments with direct business partnerships it is important that both are considered on impersonal terms.

4. Stock Investing Vs Business Partnerships

a. Quality vs Quantity

The opportunity to participate in direct business partnership is very limited. You must maintain a good many number of business contacts and this may be a big challenge for working people. Furthermore, the investment size of direct partnership is typically larger. So, even if a number of such opportunities exist, the investor's funds may not be enough to exploit all of them. Thus an investor may expect to find only a few occasional direct investment opportunities. In the case of common stock investments, it is much easier to acquire shares in the stock market. All you need is a trading account and capital. In most countries, you can even buy a single share of a company. It is therefore very common for many retail investors to hold shares of many companies at any given time.

The issue of due diligence has become one of quality vs quantity. As the number of opportunities to participate in business partnerships is low, an investor tends to do better quality research in the available free time. On the other hand, since the number of common stock investments is potentially more, the same investor may not do as well in terms of research within the same available time. After all, the amount of time available is limited for working people. Even if an investor has the inclination and competence to do required research, she/he will be faced with a handicap, which is lack of quality time. So, generally speaking, most retail investors tend to compromise on research when considering stock issues than direct partnerships.

b. Income vs Capital Gain

In a typical direct business partnership, once you are in, you are in for a very long haul. When you get into a partnership, you don't think of getting out during the next bull market. In fact, you will actually think of the business as if it is your own. Eventually, if you really want to sell your stake, then you will need to find a willing buyer yourself. There is no ready market with bid / ask quotes on a daily basis, so you will never know the market price for your stake. In the absence of the ready market, disposing of your stake will take considerable amount of your time, efforts and money. And even if you found willing buyer, the other partners may not approve the sale. So, if you are in a direct business partnership, you must know it is not easy to sell your stake. You will be stuck with the investment for long periods of time. Some people even treat it like a marriage.

Furthermore, if entering into the partnership is subsequently realized as a mistake, it is even more difficult to remedy the situation. Sometimes it may not

be possible to remedy at all. Such a situation can take toll not only on your financial health but also on your emotional balance. On the other hand, in a typical stock investment, there is a ready market that displays bid/ask prices; it also brings willing buyers and willing sellers together, so your investment can be sold quickly at the best available price. Obviously, stock investments are much more easily marketable than the direct business partnerships.

We shall now see how the unavailability of the market prices and the difficulty to sell the stake affect the psyche of an investor. Because of these two reasons, investors in business partnerships must have long-term focus. Due to constraints in selling the stake in a direct business partnership, firstly, an investor will approach due diligence process with extreme care. Secondly, the investor will provide more consideration to the *earnings and dividends* than the *market value* of the business. The unavailability of the market prices is actually a blessing in disguise; ignorance is truly bliss. If you are forced to take a long-term approach, market value becomes a secondary consideration; earnings and dividends become the top priority. If you watch the pennies the dimes will take care of themselves; watch the earnings and dividends, the market value will take care of itself.

On the contrary, in a stock investment, investor can easily go in and out of the market several times a day and with some luck it is also relatively easy to remedy a wrong decision. This results in more trading and less quality due diligence. Furthermore, the focus is more on the short-term changes in the market value rather than the earnings and dividends.

The major differences between business partnerships and common stock investments are summarized in the table below:

Business Partnerships	Common Stock Investments
<i>Opportunities</i> to participate in business part- nerships are <i>limited</i> because a retail investor may not have many contacts	Possible to invest in many common stock issues. You only need a trading account and a checkbook.
<i>Investment size</i> of the direct partnerships are usually <i>bigger</i>	It is possible to own even a single stock, so the individual investment size can be much smaller
Less diversification, more concentration risk	Diversification can be achieved easily by adding more stocks to the portfolio
Once you get into a partnership, it is <i>dif- ficult to sell</i> , since there is no ready market. You will need to find a willing buyer; even then, the other partners may not approve it. So, you may get stuck with wrong invest- ments.	Stocks can be relatively easily sold in the stock market. Mistakes can be easily corrected.

Table 6.1	Differences between Business Partnerships & Common Stock
	Investments

Since there is no ready market, there is no bid/ask quotes (hence the current value) for common stocks are available on market value of your investment market days.



Warren considers stock investments from the perspective of a business partner taking a very long-term view of the business. The matters that interested him most are the company's earning potential, earnings growth, long-term ability to fend-off its competitors etc., He is not particularly interested in the short-term fluctuations of the markets. In other words he applies all the characteristics of the direct business partnerships into common stock investing. The discipline to focus on long-term and therefore on the earnings and dividends rather than on the capital gains is the primary difference between Warren Buffett and millions of others in the stock market which made him the world's greatest investor.

5. Mr. Market by Ben Graham

The concept of Mr. Market presented here is originally from the famous book 'Intelligent Investor¹' By Benjamin Graham, also known as the father of value investing. Mr. Market is a fictional character, Ben Graham used to illustrate the workings of the stock markets while at the same time to depict the true relationship of an investor with the stock market. This idea impressed me so greatly that I decided to include it in this book for the benefit of the retail investors.

Assume that you have a small interest in a local business and there are many partners like you. One such partner is called Mr. Market. Unlike yourself and other partners, Mr. Market is very unique, in that everyday he tells you what he thinks your stake is worth. Furthermore, he also offers to buy your stake or sell additional stake to you on that basis.

He provides these services every single market day, for eternity. However, he frequently undergoes wild mood swings. Some days when he is fearful and depressed, he deeply undervalues your interest in the business and offers to sell additional interest at ridiculously low prices. On some other days when he is very euphoric and joyful, he overvalues your interest in the business and offers to sell additional interest at incredulously high prices. Only on some days he appears to be rational when his valuation of your interest seems to be reasonable.

Even though he may be affected by a great deal of mood swings, he is always obliging and helpful when transacting with you. He will not be 'upset' with you if you ignored him today; neither will he be 'happy' if you took a particular action. He would be back again the next day with another set of prices based on his ideas and mood then. Even if you are rude enough to ignore him for six months, he won't be offended, one bit. He would be back again the next day, obliging as ever to serve you, albeit with mood swings.

Given his character, let us now see how we can take advantage of him. If you are a long-term investor holding sound investments then:

- □ You would expect to see wild price fluctuations.
- □ You would realize that the price fluctuations are influenced by Mr. Market's mood swings.
- □ You would know that Mr. Market is there for your convenience.
- □ You would know that you have a choice to entertain Mr. Market or to ignore him each and every single day.

6. Using Mr. Market to Our Advantage

Now, let us go back to our 'cake shop' example. If you had done a proper due diligence before purchasing your stake in the cake shop business, would you care what Mr. Market thinks your stake is worth each and everyday? If you know your cash flows are sound, you really don't need anyone to come and tell you what the business is worth. So for this reason, you would not even bother about the existence of Mr. Market except when he interests you with his unusually high or low market price valuations. For, when he offers sky high prices for your stake you might want to sell some of your stake and when he offers rock bottom prices you might want to buy some more. Furthermore, you are rooted firmly with a good understanding of the value of your business and you will transact with Mr. Market only when it *suits* you.

Whether you choose to buy or sell, you will be taking advantage of the mood swings of Mr. Market in full awareness. In other words, when Mr. Market is in high spirits with enthusiasm, instead of participating in the party, you will be thinking of selling your stake; similarly when Mr. Market is fearful of the future and in worst of spirits, instead of worrying along with him, you will be thinking of buying some additional stake. This is called contrarian behavior in investing, so successfully employed by Graham's student Warren Buffett to achieve spectacular success. His famous quote 'Be Fearful When Others Are Greedy and Greedy When Others Are Fearful' can effectively sum up his contrarian strategy.

Warren has been able to consistently demonstrate (through his investment records) his ability to 'buy low and sell high' over all these years to bring about the spectacular investment returns that he had achieved. Warren's 'selective contrarian' style can therefore be over simplified (for the sake of understanding at this stage) as rigorously following 'buy low and sell high strategy' without succumbing neither to his own emotions nor to that of the investment community as a whole.

How Warren had come to possess this superior control over his emotions? How is that he could not be bothered by the prevailing market sentiments? How come he can invariably go against the market and in the process made so much wealth for him and for the shareholders of his company? The answer is reasonably simple. He knows his investments too well to be swayed by the whims and fancies of the market. It means that he is able to choose the right business; he has a thorough understanding of its operations; and he does not value a business based on stock market's perception of its value. He uses the market only when it is advantageous to him. So, the only way to 'be greedy when others are fearful' is when you are very confident of your investments.

7. Efficiency of Markets

The efficient-market hypothesis (EMH) asserts that financial markets are 'informationally efficient'. So, in the long run, it is not possible to consistently beat the overall market as the prices adjust quickly to all publicly available information. However, we know that in reality, investors like Warren have achieved super normal performance consistently beating the S&P 500² index over a very long period of years. If no one has information advantage as claimed by the EMH, how can some investors manage to get stellar results year after year? The answer to this question is that the stock markets are efficient only in the short-term; in doing so they miss completely the big picture. What it means is that the stock prices quickly adjust to new price levels upon arrival of bits and pieces of new information (or data) while ignoring completely the long-term prospects. *Penny-wise and pound-foolish!*

This efficiency is ensured by the existence of watchful financial media, intelligent research analysts and hundreds of thousands of professional traders who are continuously scouring the market to benefit from valuable information. Financial media needs exciting stories and breaking news everyday to keep up with their media ratings; research analysts come out with updated reports each time there is news on a company or after quarterly results, helping their clients trade better, obviously to increase brokerage revenue; short-term traders typically enter into and close a position within a couple of days; some of them close even within the same day with the sole purpose of trying to profit from short-term price inefficiencies.

If a company's quarterly earnings per share (EPS) fail to meet the expectations of the analysts, even by a few cents, its stock gets punished. On the other hand if a company's EPS beats the expectations even by a few cents, the stock price may reach for the stars. This is the reason why the stock prices can go up one day; go down the next day; all based on pieces of information as and when they arrive. The continuous stream of economic data releases by various government agencies also creates flurry of movement in the stock prices. Stock prices may take a beating based on this week's economic data while the same stocks can advance based on the next week's data. You can have a complete market cycle within a single week! Thus you can see, majority of the market participants are motivated by the short-term price movements, which makes markets efficient in the short-term. The reverse of the foregoing statement is also true. Since many people are not interested in long-term performance of stocks, this area is least crowded. This lack of competition in this area makes the market *inefficient in the long run*, offering bountiful of opportunities for people who can look beyond the smoke screens created out of daily price movements, market news and myriad financial data.

What does this mean to the working class retail investors? If a common retail investor wants to play the market on short-term basis, unfortunately she/he would be thoroughly disappointed. The simple reason is that the working class retail investor lacks both the time and the tools needed to monitor the market gyrations on a minute-by-minute basis, to watch for financial news being churned out by the financial media round the clock and most importantly to interpret the news to make mileage out of it. An ordinary investor will almost always be at an information disadvantage. His news is always late and he would have no edge at all to win in this game. The competition is simply far too great in the short-term, whereas the space is not so crowded in the long-term. So, make your pick.

8. Intelligent Stock Investing by Philip Fisher

I read a metaphor in the book 'Common Stocks and Uncommon Profits'³ by Philip A. Fisher, a contemporary of Ben Graham from whom Warren Buffett is said to have learned the philosophy of growth stock investing. This metaphor depicts the common stock investing in such a radical manner that I decided to include it in this book.

Assume it is your graduation day; your classmates and you are looking forward to entering the workforce soon. On this day, each of your classmates had an urgent need for cash and each offered you the same deal. If you would give them 10 times their first year's salary today, they would give you back onefourth of their annual salaries for the rest of their lives. While you know it is an irresistible offer, you had spare cash to deal with only three of your classmates. What criteria would you employ to choose three classmates among a class size of, say 50 students? Would you choose anyone who is not very familiar to you? No. This simple condition may eliminate quite a number of your classmates. You will start to analyze the remaining classmates solely based on your judgment of their future earning potential. You may not even consider your best friend if you think his/her future prospects may not be great. This is an analogy of intelligent stock buying.

Ten years have passed. One of the three classmates has had an exceptional career with large compensation, bonuses, stock options and pension benefits etc. He is inline for the top position in his organization with even greater potential for higher earnings. You are very pleased with your contract with him that brings you one-fourth of whatever he is making. In this case, would you ever sell the contract that you had made with him? Never. This is an analogy of intelligent stock selling.

However, stock investments are even better than investing in your classmates because, your classmates must die one day ceasing your cash flows. But, the companies have no finite lifetimes; they can be eternal. So, according to Philip Fisher, if the stock was bought correctly, the appropriate time to sell it is—almost never. If you owned a private business that consistently produces fantastic cash flows, would you ever sell it? Never. You will probably leave it as an inheritance to your descendants; but you may never sell it. In this sense, intelligently executed stock investments are not very different from investments in private businesses.

9. Information on Listed Companies

The US listed companies are required to file in their quarterly financial statements to SEC, which can be downloaded at <u>http://www.sec.gov/edgar.shtml</u>. A typical financial statement contains Income Statement, Cash Flow Statement, Balance Sheet, Explanation notes and many other related statements. If you are a shareholder of a listed company you will receive an Annual Report every year containing all of the above and much more information like Chairman's Statement, geographical distribution of revenue, profits, etc.

The financial statements for companies listed in stock exchanges of other countries can be downloaded from websites of the respective stock exchanges as listed below:

Canada	 <u>www.sedar.com</u> French and English
Hong Kong	- <u>http://www.hkexnews.hk</u>
India	– <u>http://www.bseindia.com</u>
Japan	- <u>http://info.edinet-fsa.go.jp/</u> in Japanese
Singapore	– <u>http://www.sgx.com/</u>
UK	– <u>http://www.londonstockexchange.com</u>

With the advent of faster and cheaper access to the Internet, the publicly available information on listed companies is now available at a mouse click for all matured markets. In fact, the quantity of the data on any given subject available on the Internet is so wide and deep that retrieving relevant information among the ocean of data is a huge challenge. One must have strong will power and discipline to keep focused while on the Internet amidst several distractions in the form of pop-ups, e-mail messages and chatting invitations. Unlike the managers of the investment funds, the working class retail investors must perform research on companies during their spare time in the evenings or during the weekends. And any distraction means more time and effort required to complete the task.

So, it is really important to look for more efficient ways of finding required information. There are many financial websites that come to our aid in providing consolidated financial information on companies. Instead of going through several annual reports to get multiple years' financial data, these websites display them on a single web page. Furthermore, you will be able to find much more related information like financial ratios, news, charts, Insider Trades, Ownership of the company etc., within a single website. You can save a great deal of your time and effort by making use of these financial websites listed below:

GuruFocus	- <u>http://gurufocus.com</u>
Morningstar	- <u>http://www.morningstar.com</u>
MSN Money	- <u>http://money.msn.com/</u>
Google Finance	- http://www.google.com/finance
Yahoo Finance	- <u>http://finance.yahoo.com</u>
Reuters	- <u>http://www.reuters.com/</u>

The detailed instructions to extract the information required for financial evaluation (from the two websites I normally use) have been provided in the table below.

How to get the consolidated data for evaluation? GURUFOCUS WEBSITE

- 1. Visit GuruFocus http://www.gurufocus.com
- 2. Type in the company's stock ticker code (KO for Coca-Cola, PG for Procter & Gamble, GOOG for Google etc.,) and click 'Search'
- 3. Click on '10-Y Financials'. Data on Income statement, balance sheet, cash flow statements, performance ratios and per-share data are available on a single webpage.

MORNINGSTAR WEBSITE

- 1. Visit Morningstar http://www. morningstar.com
- 2. Type in the company's stock ticker code (KO for Coca-Cola, PG for Procter & Gamble, GOOG for Google ... and so on) in the box next to 'Quote' and then click on 'Quote'
- 3. Click on 'Key Ratios'
- You will see two tables viz Financials and Key Ratios. This site also allows the users to export the data (free of charge) to Microsoft[®] Excel format.

To Summarize...

- 1. The common stock is a security that represents fractional ownership in a company.
- 2. One of the main reasons for investing in stocks is the ability to participate in the prospects of a good business and to leverage on the strengths of great businessmen without having to spend our own time or effort.
- 3. Investors who enter into private business partnerships tend to perform more due diligence on such ventures than stock investors. They also focus more on earnings and dividends from their businesses than the possible capital gains recognized upon selling them. Stock investors on

the other hand, tend to focus more on capital gains than the earnings and dividends.

- 4. The Markets live forever. They are always there to do us favor by offering bid/ask quotes on every market day. While we can make use of them when they are overly optimistic or pessimistic, we can also totally ignore them without paying any attention to them at all.
- 5. Due to the presence of majority of the people with short-term focus, the markets are efficient in the short-term. Similarly, due to the presence of less number of people with long-term focus, the markets are inefficient in the long-term.
- 6. As the working people lack time for investing, it is difficult for them to survive with short-term focus, as this space is highly crowded.
- 7. Have you made up your mind to be a long-term investor or a trader? This is a decision you cannot delay any longer. Both require different skill sets and attitudes towards investing. I do not know anyone who had done well in both. So, make this decision right now.
- 8. If you have decided to become a long-term investor, then you can move on to the next chapter. If you are going to be a trader, then go straight to the chapter on Investing Psychology.

7. Finding Great Businesses Part-I

(Business Evaluation Questionnaire)

A company that makes its customers delightful will most likely make its shareholders also delightful

1. Brand Consciousness

In our daily lives, we personally make use of several consumer products such as cereals, drinks, cosmetics, toiletries and so on. We also have strong likes and dislikes about such products. The likes and dislikes form purchasing patterns, which are as strong as habits. As the saying goes, humans are creatures of habits and we know habits are hard to break. For instance, I have been eating a certain brand of breakfast cereals for the last 15 years and every time I try a new brand there is always something I am not particularly happy about. So, I go back to the same type of cereals. So long as my taste buds are the way they are right now, my preference is not likely to change. This means, this eating behavior of mine has made me a loyal customer to the company, adding a small revenue and profit to the company's financial statements year after year!

This purchasing habit is not unique in me, as you can also observe it in yourself when you visit a super market. I know some people who will travel half the way across Singapore (it is a very small island, though) every Sunday, just to buy fish from a particular shop, even though it can be bought from a super market two blocks away from home. I am sure you know of people who will drive only a particular brand of car, be it Toyota, BMW or Mercedes, use only a particular brand of toothpaste, fly in a particular airlines, the list goes on. What is relevant for us is that all these seemingly natural human behavior translates into revenue and profit for the companies that sell these products and services. And what makes it more interesting is that such behavior is not too difficult to notice; all it needs is an increased awareness, which is called 'brand consciousness'. The purpose of this section is to make you aware that a company that makes its customers delightful will most likely make its shareholders also delightful!

Similar to companies, countries also develop brand over a period of time. When it comes to manufacturing the first country you will think of is probably China; for defense technology you will think of the US; for IT software and back-office work you might think of India; for Government efficiency and water technology it must be Singapore; for natural resources you will think of Australia and Canada; you can build a fairly long list pretty soon as you start to pay attention to these seemingly unimportant observations. The branding awareness on countries will be very useful and in fact essential for investing in foreign countries.

2. Brand Choice Questionnaire

From now onwards, start to pay attention to the brand of products and services that you purchase. Whenever you make a purchase you ask yourself why you chose to buy a product from a particular brand and not from its competitor. Once you are conscious about the brand choices you make in your daily life, you will also notice the buying patterns of people around you, your family members, friends, relatives, colleagues etc.,

Following is a list of questionnaire to help you understand your brand choices. It is a good idea to take some time off NOW to fill-in the answers. You may have more than one choice in each category and you may add your own questions at the end.

Brand Choice Questionnaire:

My favorite cola drink is _____ Choices: Pepsi cola, Coca-Cola, ... My favorite energy drink is _____ Choices: 100 Plus, Red bull, ... My favorite pizza is _____ Choices: Pizza Hut, Domino's, ... My favorite brand of burgers is _____ Choices: McDonald's, Burger King, ... My favorite brand of fried chicken is Choices: KFC, ... My favorite fast car is _____ Choices: Ferrari, Lamborghini, ... My favorite luxury car is Choices: BMW, Mercedes Benz, Jaguar, Lexus, ... My favorite sports shoes is Choices: Nike, Reebok, ... I charge all my expense to _____ Choices: AMEX, Visa, Master, ... My favorite brand of ketchup is _____ Choices: Heinz, Maggie of Nestle, ... My favorite brand of breakfast cereals is Choices: Post, Kellogg's, Nestle, ...

My favorite music player is Choices: Apple Ipod, Creative,			
My favorite	_is		
My favorite	_is		
My favorite	_is		

Note: [®] The above list contains names of registered trademarks of several companies.

3. Purchase Questionnaire

By now you would have a fairly good understanding of the brand choices you have been making all along. For the next one-month or so, whenever you buy a product, use a service, eat in a fast-food restaurant or drink coffee in a Starbuck's cafe make the following observations and record in the purchase questionnaire.

Purchase Questionnaire:

- 1. Product or Service
- 2. Brand
- 3. Why this Brand?
- 4. Why not the competitor's Brand?
- 5. Are you happy with the product or service?
- 6. Did you face any quality issues with the products or service?
- 7. Was the service personnel able to resolve the issue to your satisfaction?
- 8. If the answer to question-7 is negative, will you buy the product or service from the same company again?

Most people should be able to fill-in at least 10 such questionnaires within a month. Be completely truthful when answering the questions. I am sure some of you are wondering why such an exercise is required to be done. The reason is simple. If you do as instructed, your understanding of your own behavior will crystallize into a brand consciousness. Then you will not go through purchasing a product or service merely as a customer, but also as a watchful person always on the look-out for a good investment opportunity. After all, if you are truly delighted with a product or service, the chances are that many others might feel the same way, which should increase the prospects for the company. Conversely, if you are thoroughly disappointed with a company's product or service, surely many others will go through similar experiences and so a financial disaster for the company may not be too far away.

4. Your list of 1st Class Products and Services

Lastly, make a list of all the products that your family members and you use. Split them up into two categories (1) products that I adore, services that I love (2) No special attachment, nevertheless I end up buying.

 Table 7.1
 Classification of products & services that we normally purchase

The products that I adore / Services I love	No special attachment / Nevertheless I buy
Example: Favorite breakfast cereals, Fast foods, Chocolates, Apple's 'iProducts' etc.,	Example: I hate shaving; nevertheless I use Gillette razors and shaving foams every day. Once you have bought the cheap printer, you must continue to buy the expensive cartridges. Utilities, telephone, internet service providers etc.,

Some of the most common categories have been listed for your convenience. You may be using many more categories than listed, so take some time off to think over and write them.

Table 7.2	List of products	& services that we	normally purchase
	List of products	or services that we	normany parenase

•]	Perfumes	•	Speakers	•	Credit cards
• '	Toiletries	•	Camera	•	Home appliances
• (Cosmetics	•	Computer	•	Soft drink
• (Car	•	Printer & Cartridges	•	Beer
• (Gasoline	•	Watch	•	Fast food
•]	Phone	•	Tablet PC		
•]	Mobile Phone	•	Hand Bags		
• '	Telephone co	•	Air travel		
•]	Internet	•	Utilities		
•]	MP3 Player	•	Car Insurance		

Once you have done the above exercise, you would be literally staring at several investible companies. This list may serve very well as a great starting point. You can then take the companies from your list one by one and measure them against a list of investment criteria to evaluate the investment merit of each company. You will be taking investment decisions with the firm knowledge that the companies in your list manufacture and sell decent products that you like and in some cases adore. Using this approach will certainly stop you from investing (speculating) in obscure companies without any products to sell in the first place or companies that sell lousy products and services.

5. Framework for Evaluation

The process of evaluating a prospective company for investment is relatively simple. If you are able to understand the instructions of your DVD recorder then understanding this procedure should not be too difficult. However, the difficulty lies in implementing these steps consistently prior to making your investments. Most people I know would buy the stock first and then try to justify their action by doing stock evaluations merely as a ritual. An element of bias and our inherent 'need to be right' can easily cloud our judgments in such instances. However, if we do these evaluations before making our investments, we can be ruthlessly objective. I wish that for you as well as for myself.

The evaluation procedure has been divided into two groups. The first group deals with the attributes of the business itself, which we will discuss in this chapter. The second group deals with the numbers from financial statements. Upon completion of these steps, you must be able to create a 'wait list' of prospective companies for investment. Note that I called it as *wait list* and not as watch list. There is a psychological reason behind this. If a person is on wait list for admission into a college, it means not everyone can get into the college; the admission is rather tough. Similarly, it is good to keep your portfolio tough to get into; not every company can make it. Calling it a wait list will give you a superior sense of control over your investment decisions. The six steps to evaluate the business model of a company are listed below.

Step-1: Competitive Advantage Business.

Step-2: Will the company's products be relevant in the future?

Step-3: Dependency on Highly qualified labor & Unionized Labor

Step-4: Maintenance and R&D expenses.

Step-5: Frequency of Repeat purchases.

Step-6: How satisfied are you as a customer?

6. Step-1. Competitive Advantage Business

Firstly, you must understand that not all businesses are created equal. Some businesses have competitive advantage over their competitors that enable them to earn monopoly-like profits. The other group, in the absence of any competitive advantage, must compete only on price.

In business, I look for economic castles protected by unbreachable 'moats'.

Warren Buffett

Moats are traditionally deep canals surrounding castles or capital cities to act as a first line of defense from enemies. To dissuade the invaders from swimming to reach the castle, moats were usually infested with crocodiles. Wide moats offer tough resistance to the invaders making the castles safer. But narrow moats do not offer much defense and the castles can be breached with relative ease. Warren considers business as a 'castle' and the moat as its competitive advantage. He picks companies that have wide moats around their businesses. Such companies can sustain their competitive advantage over their competitors for a long period of time in the future. These companies are also able to retain their market share and profits. Basic economic theory suggests that, over time, competition will erode away excess profits in any industry. Only companies having a wide economic moat can survive over the long term. During an economic boom most companies will do good. However, during a downtrend only those companies with a durable competitive advantage will survive.

The general characteristics of both competitive advantage business and price competitive business are listed in the table below:

Competitive Advantage Business	Price Competitive Business
Monopoly (Sole supplier) that can increase prices at will	One of many suppliers in the market segment
Consumer Monopoly—Differentiated products or services with a Unique brand appeal	Generic commodity like products or services without much product differen- tiation
Patent protected technology	Generic product producers
Low cost producers	Industry average or above-average cost producers

a. Monopoly that can increase prices at will

A company can be called as a monopoly if that company is the sole supplier of a particular range of goods or services. For example, a utility company may be considered as a monopoly in a city because only it can supply water, electricity, gas etc., to the residents of the city. A newspaper company can be a monopoly in a town if only it has the network to deliver newspapers to the residents of the town. In many countries, national oil companies have exclusive right to explore and sell oil; these companies are called monopolies. If you want to run Windows Operating System in a computer anywhere in the world, you can only buy it from Microsoft Inc, so it is another example of monopoly. A stock exchange is also a monopoly; if you wish to buy or sell stocks listed in a stock exchange, you must pay a fee for the execution of your trades.

The monopoly companies must have the flexibility over production and absolute control over the pricing of their products. In other words, monopoly companies should be able to increase prices at will so that they can earn super high profits. A utility company although a monopoly, almost always is subject to government regulations; price increases are subject to approvals from government agencies. So, the utility companies cannot qualify to our criterion. On the other hand, consider the sole newspaper company in a town. If someone wants to sell a property or if a local restaurant wants to reach out to more clientele, they must place their advertisement in that newspaper only. This unique position presents the company with the ability to earn monopoly profits. Similarly, as a sole supplier of Windows Operating system, Microsoft also is in a unique position to earn monopoly profits on a global scale. Hence, an important aspect you must consider is the ability to increase price to earn monopoly profits.

b. Consumer Monopoly Business

Some companies derive competitive advantage from the differentiated products they supply. Coca-Cola is an example of such a company. There may be several cola brands in the market, but if you want to drink Coke, you have to buy it from Coca-Cola only. Even if a competitor reduces price of their cola drink, the market share of Coca-Cola is not going to be adversely affected. Similarly, if Coca-Cola increases the price of the drink, its sales will not be affected. This ability to increase prices without much impact to the sales gives Coca-Cola a consumer monopoly. Examples of such businesses are Nike, KFC, McDonald's, Pizza Hut, Wrigley's, Hershey's, BMW & Ferrari – to name a few.

Let us now consider two well-known companies; Coca-Cola and Ford. Both the companies are over 100 years old with strong brand names. Both companies are listed in the New York Stock Exchange (NYSE) with multi billion dollars market capitalization. Both companies have strong local and international operations.

We will ask the same question. Whether the company is able to increase prices without affecting sales? The companies like Coca-Cola can easily increase their price since even a 10% increase is only a few cents difference to the customers. Many customers will not even notice the price increase. However, if companies like Ford were to increase prices, the customers may switch to alternate brands of cars. The brand loyalty in the mass-market car segment is very weak. If Ford were to increase prices, they might lose some sales to other cheaper manufacturers. This type of business is called 'commodity' type where price competition is very intense. This however, is only applicable to the mass-market cars. Luxury car brands like BMW, Mercedes, Jaguar, Lexus and the sports car brands such as Ferrari, Lamborghini and Porche command considerable brand loyalty; people tend to identify themselves with their cars; therefore companies in sports and luxury car segments are able to increase prices without much damage to their sales.

c. Patents

Some companies, particularly those in the pharmaceutical and high technology industries possess competitive advantage by virtue of holding patents. The presence of such patents, keeps others from copying the patented technologies and processes for a fixed period of time. The patent holders have exclusive use of these technologies and processes with which they can generate super normal profits.

But once the patents are expired, the technology end up in public domain, with which any drug producer can manufacture and market much cheaper generic drugs thereby putting an end to the excess profits for the original patent holder. There is also another issue with drug companies, which is the threat of class-action suits. If a drug ultimately turns-out to contain harmful side effects, the company can be sued, which can even result in bankruptcy of the company. Because of these reasons, I am not a fan of small pharmaceutical companies; one lawsuit can wipe them clean. Only the very large pharmaceutical companies having good track record and continuous pipeline of patents qualify as sound investments.

d. Low Cost Producer

Some companies derive competitive advantage from their ability to lower their costs below the industry average; lower costs enable them to sell their products at cheaper prices than their competitors. In other words, they sell large volumes at cheap prices thereby, controlling a huge market share. For example, Wal-Mart, the largest retailer in the US, is able to buy products from its suppliers at huge discounts because of its immense size and order volume. Since their cost is much lower than that of its competitors, Wal-Mart is able to pass on the cost savings to its customers by keeping the prices lower than any of its competitors.

This game is played based purely on high volume and not on high profit margin. This means that Wal-Mart earns its profits not by increasing its profit margin; it does so by reducing its costs because of its high sales volume. This poses a huge barrier for entry to a new competitor. Usually, new businesses are motivated by big profit margins. In a market segment where the profit margins are high, new enterprises spring up thereby increasing competition and reducing profit margins for everyone in the segment. This usually affects the existing businesses more; as they will find both their market share and profit margins deteriorate. However, in a market segment where the profit margins are already lower, there is no motivation for new businesses to enter, as their costs will be higher and sales volume lower than the existing businesses, making survival very difficult for new entrants. Hence companies like Wal-Mart can earn monopoly like profits due to its competitive advantage as a low cost producer.

To sum up, a company with a wide moat must be able to do one of the two things

- 1. It must be able to charge more for the same or similar products & services
 - OR
- 2. It must be able to sell more of its products & services than its competitors

Business Evaluation Questions

- 1. Is the company a monopoly with the ability to increase prices at will?
- Does the company possess brand/s that command consumer loyalty? Price increases should not drive the customers away to its competitors
- 3. Does the company possess patents and other intellectual properties that protect its competitive advantage?
- 4. Is the company a low cost producer in its industry segment?
- 5. Is the economic moat in the form of monopoly, consumer monopoly, low cost producer, patents etc., sustainable in the long term?

7. Step-2. Will the Company's Products be Relevant in the Future?

The next question to ask is 'Will the products and services the company is selling now be relevant in the future also? Let us consider two companies; Hershey's and Microsoft. Hershey's manufacture and sell chocolate bars and Microsoft sells Windows Operating systems. Both companies are in dominant positions in their respective market segments at the present moment. What are the chances that people will still eat chocolate bars in 50 years? Unless of course, the human taste buds undergo a rapid evolutionary change to shun sweets, the answer is a resounding YES. You can safely assume that children will love chocolates and their parents will buy for them, for many centuries to come. Hence, the future product relevance is very high for Hershey's.

Now, consider the Windows Operating System and ask the same question. What are the chances that Windows OS will be relevant in 50 years? While we cannot predict the future precisely, we can certainly assume that in its present form Windows OS cannot hold its dominant position for even the next twenty years. With the advent of 'cloud' computing technologies, it is not inconceivable to think of a personal computer without any expensive operating system at all. A personal computer in the future might have a minimalistic OS in the form of a firmware, with the rest of the applications in the 'cloud' that can be invoked on demand. Whether or not this becomes true, it is fairly clear that the technology evolutions happen much faster than the 'taste bud' evolution, rendering the current technology products obsolete rather quickly. So, one cannot be certain if a technology product a company is currently selling will be relevant in the future.

This problem is not unique to high-tech industries alone as you can find them in other industries also. One good example is the energy companies dealing with conventional energy sources like oil and coal. Although oil and coal have been the primary energy sources during the last century, are we in a position to safely conclude that they will remain so in the future? With ever increasing energy prices coupled with global awareness on environment, incentives for innovation in clean energy technology are enormous. Furthermore, the global investments in green energy have been increasing exponentially since 2004. So, if we say that oil and coal will lose some of their shine during the next 50 years, certainly it will not be an overstatement.

It does not mean that the oil companies will remain idle either. In fact, many oil companies are already operating their own solar divisions like Shell Solar, BP Solar etc. Ultimately, when a cost efficient green technology arrives, a new world order will also emerge as it did in the case of personal computer industry. Several current energy companies will lose their businesses and many new players will dominate in the new green energy industry. Paper-based publishing and wireline telephones are some more examples of similar sunset industries that will face diminishing fortunes during this century. On the other hand, companies like Hershey's, McDonalds, KFC, Coca-Cola have been making the same product for many decades in the past and it can be reasonably expected that they will continue to do so in the future also. The competitive advantage they have developed is generating better than average returns for their shareholders now. Since their 'goods' are not going to be obsolete for a very long time, there is not much uncertainty about their future business prospects. As there are 7 billion people sharing our planet now and the population is only expected to increase, their businesses may be expected to get even better.

Furthermore, these companies need not constantly develop new products or services incurring additional expenses. Some of their product changes are achieved by simply changing the wrappers and containers. In the absence of the expenses related to developing new products, these companies can then use their superior earnings to increase the shareholder's wealth by expanding operations, increasing the dividends to the shareholders or buying back their own shares.

Business Evaluation Questions (continued)

- 6. Will the company's products and services be relevant in the future in their current form?
- 7. Will the company need to constantly develop new products and services for the future? If yes, can they develop them at low cost, like changing wrappers and containers?

8. Step-3. Dependency on Highly Qualified Labor and Unionized Labor

The next question to ask is if the company is dependant on highly qualified labor and/or unionized labor. Let us first focus our attention on the issue of *highly qualified labor*. Companies like Motorola, Intel, Microsoft, Ford, Boeing etc., require highly qualified people with many years of education and professional experience to carry out their job functions. These companies have highly talented people with correspondingly high compensation packages. Such companies must have superior human-resource policies that reward their employees well and provide them with good career path. The companies must also upgrade their employees on a continuous basis to keep them abreast of latest technology by imparting regular training. So, managing a large pool of highly qualified labor force can be very expensive for the company.

Furthermore, these employees must be managed with Tender Loving Care (TLC) or else they may leave and join force with a competitor. Hence, the company's continuing competitive advantage is dependent on the goodwill of its workforce, which is the major source of uncertainty to the future prospects of the company. It is not uncommon for a group of key executives leaving enmasse taking with them technical expertise, major clients etc., to a competing

firm. Now take for example, two companies Ford and McDonalds. Ford requires highly qualified people with many years of technical education and relevant industrial experience to design and manufacture newer, better and more fuelefficient cars. The car industry requires companies to innovate continuously in order to survive. Remember, we are not even considering growth at this time; we are only concerned with innovation at high cost, required merely to survive in this industry.

On the other hand, McDonald's does not require people with such a high level of technical expertise for the manufacture of burgers and fries. The company is not required to invest heavily in product innovation; as mentioned earlier it only needs to make some cosmetic changes to the packaging from time to time. The workforce need not be highly qualified and hence the compensation package need not be big. Furthermore, the company need not spend huge amounts of money in training. McDonald's can literally take a person from the street and give a couple of weeks of training and off he goes to work. The money that the company is not required spending in big pay packages and training can directly accrue to the shareholders.

We will now move on to the next important issue of *unionized labor*. Unions lobby for better pay, bonus and working conditions for its members who are employees of a company. In union there is strength and it is able to negotiate better than a small group of disgruntled employees. For the company also it is better to deal with a single common agenda from the union rather than to address various issues from diverse groups of employees. However in reality, labor unions use their strength to engage in hardball tactics like calling for general strikes. In such situations who actually loses? Everyone. The employees themselves, shareholders and the public they serve.

As I am writing this chapter, there is news that a major international airlines company had grounded its entire fleet due to breakdown of negotiations between the management and its major unions. The TV news footage showed pictures of thousands of stranded passengers in several major airports. If you got stranded in a foreign airport due to an airline strike, will you fly with them again? You will not, if you had choice. This is a fantastic way of losing customers. Big companies typically spend billions of marketing dollars to woo new customers. After having spent huge sums of money in marketing, a company acquires customers; only to lose them all in a big way like this! Moreover, one company's loss is another company's gain leaving the competitors with more business.

The companies with high fixed costs are more vulnerable to strikes by the labor unions. When the fixed costs are high, companies must spend more amount of money whether or not they run the operations, and this increases the bargaining power of the unions. Grounding the entire fleet of airplanes means incurring huge amounts of ownership & maintenance costs with no income to offset. The financial health of the company can worsen overnight as a result.

Furthermore, when the company loses its business to its competitors (after a strike) obviously it has to reduce its own workforce. The company has to
then resort to retrenchments or reduced work hours. In this way, employees also will eventually lose out. So, nobody wins in the end while the shareholders suffer first as the share prices get punished long before the strike itself. Then, assuming that all the parties put their acts together and the company eventually returns to normal, the share prices will be the last to recover. The prospect for the shareholders therefore is 'First-out Last-in' which seems to be an unfair proposition.

Thus, the presence of unionized labor in a company is almost always detrimental for its shareholders because it contains a possibility of unilateral industrial actions such as strikes, requiring the management to be extra vigilant in its relations with the unions. This additional effort is economically unproductive. In the absence of unionized labor, the management can use the same time and effort to increase its sales, marketing and manufacturing activities and thereby, enhance shareholder value.

Business Evaluation Questions (continued)

- 8. Is the company dependent on highly qualified labor that requires several years of formal education and continuous training?
- 9. Does the company have organized labor that threatens unilateral industrial actions such as strikes?

9. Step-4. Maintenance and R&D Expenses

a. Maintenance Expenses

If, in your home, the pipes leak or if the heating failed or if the garage door got stuck midway, you know you must fix them real quick. Not fixing them immediately can be unpleasant to everyone living in the house and at times can be unsafe also. This is called *unplanned maintenance* and it can be stressful and highly expensive. If the heating system has failed on a winter night, how will you react? Fix first, talk later. You will be willing to spend a small fortune to fix it during the following day, because you just shudder the thought of previous night's experience. The cost in this case has two components, direct and indirect costs. Direct cost is the actual cost of repairing the faulty machine. The indirect costs are, in this case, loss of sleep, need to apply leave to stay at home to get the repair done etc., The indirect costs are usually much more than the direct costs itself.

After this painful experience, if a smart repairman tells you that he can periodically 'maintain' your heating system to avoid such sudden failures, will you take the offer? Sure. What you need is peace of mind and you will be happy to pay a handsome price (did I hear ransom?) for that. The repairman offers to do what is called as *preventive maintenance*. The logic for that is by regularly maintaining the heating system (and periodically replacing knownto-fail components) you can reduce costly *sudden* failures. It is for this reason that most car manufacturers recommend the car owners to follow a prescribed maintenance schedule to reduce costly breakdowns.

Now for example, if the grass is overgrown in your lawn, you may take your own sweet time to cut and there is really no urgency (unless you are bothered by the nosy neighbor's 'friendly' remarks). You know that the grass always grows; there is a degree of predictability, which allows you to engage a contractor to cut the grass at regular intervals. So, you need not wait for the grass to grow and then call for help. You can take an action in anticipation. This is called *planned maintenance*. For all three types of maintenance activities, you must spend money (or effort if you mow the lawn yourself) whether or not you have an allocated budget for such expenses. Furthermore, you must maintain your place of abode even if you are only renting the place.

Now let us move to the corporate scene and find that companies are not very much different from the individuals in so far as the requirement to maintain is concerned. The companies must maintain their facilities, whether owned or leased. The companies also have direct and indirect costs. Failure of a machine in a factory can result in direct costs to repair the machine and indirect costs such as loss of production, loss of unprocessed (perishable) inventory, idle time of workers that ought to be compensated and other fixed costs. Due to very high indirect costs, companies are more willing to spend money on preventive maintenance than individuals do. As professional organizations, companies allocate budgets for maintenance unlike individuals.

Remember, the money the company is spending on maintenance is not going to improve the earnings in the future period. The maintenance effort is merely to sustain the current earnings and therefore it is part of the operational expenses. It is like spending money to mow the lawn now, which is not going to make you any merrier than the previous month. Let us now compare two companies Coca-Cola and Boeing. Both are American corporations, operating multi billion dollar businesses and are market leaders in their fields. The stocks of both companies are components in Dow Jones Industrial Average (DJIA).

By virtue of having highly capital-intensive operations, Boeing must spend a big part of the income to maintain its huge technologically advanced factories. The technology employed by Boeing to build modern aircrafts is far more complicated than that used by Coca-Cola for making carbonated drinks. Hence, the maintenance operations will require highly qualified workforce to understand and perform. Even though the aircraft models are not many, the customization demands by the airline companies (clients) requires Boeing to create many unique designs. But for Coca-Cola, it is possible to have standardized operation and maintenance activities in its manufacturing facilities across the world. Less money on maintenance means more money for its shareholders.

b. R&D Expenses

Even though Boeing has only one major competitor, Airbus, in the commercial aircraft business, the competition between the two companies is very fierce. In

order to keep the existing clients and to secure new clients, both Boeing and Airbus must spend billions of dollars in R&D to develop newer, better and fuelefficient planes. The competition is not much different from companies in the Automobile industry. Spending money in R&D itself is not an issue *per se.* For instance, if the R&D effort is to develop new products and to acquire more market share, then it is reasonable. Even then there are many uncertainties about the market success of the new products. However, if a company has to spend big R&D money merely to hold on to the market share (and revenue) then they are just additional costs for doing business.

Furthermore, the continuous product improvements result in never ending modifications to the production lines. These modifications involve in retooling, providing additional training to the workers to familiarize with the new changes in addition to compliances with safety and environment regulations. These costly modifications may not necessarily enable Boeing to manufacture more number of airplanes and therefore may not translate into higher revenue. They just add up to the costs of operations to merely manufacture the same number of better and smarter planes. Coca-Cola on the other hand need not make continuous product improvements that warrant modifications to the manufacturing process on a regular basis. In fact, the product has been the most popular thirst quencher for over a century and it can continue like that for a very long time. No periodic product improvements are mandated by the industry.

Business Evaluation Questions (continued)

- 10. Is the company expected to spend a great deal of money on maintenance and upgradation of its manufacturing facilities just to maintain the current sales?
- 11. Does the company spend R&D expenses and product improvements to sustain its competitive advantage?

10. Step-5. Frequency of Repeat Purchases

How often would you buy the product or the service the company is selling? In case of Coca-Cola, one could consume a drink with almost every meal; the frequency of repeat purchases is very high. The same goes with breakfast cereals, beer and fast foods. Another popular brand is Gillette, which is proud to advertise that more than 600 million people use their products every single day. Companies in industries such as Food & Beverage (F&B), Cosmetics, Apparels, Insurance and Banking sectors are able to supply products & services that people must use very frequently. People must eat three times a day for the rest of their lives and the population in the planet does not show any sign of decreasing! The companies who are the market leaders in the F&B industry stand to gain a lot from this perpetual appetite. The same can be said of market leaders in cosmetics and apparels as they are facing ever-increasing market size for their products and services. Companies in Insurance & Banking sector also get to sell the same services several times to their clients during their lifetime. Let us assume that a person owns a car at the age of 22 and decides to stop driving (for the sake of others!) at the age of 72. In this case, he would be paying car insurance for a clean 50 years and this presupposes that he would own only one car at any time. This is such a fantastic repeat business. Warren Buffett had recognized the earnings potential of the insurance business very early in life during his research as an MBA student and made a huge profit in Geico, a low cost auto insurance company.

You open a savings account with ATM facility and every time you use the machine, you must pay the bank a fee. Sometimes banks charge a flat monthly account maintenance fee. When you take a car loan or a mortgage for your home, the bank receives interest charges for several years. Every time you go to the bank for Demand draft (DD), Mail Transfer (MT), Telegraphic Transfer (TT, I wonder why they still call it telegraphic transfer, as telegrams are all but dead) you must pay the bank for such services. When you have a credit card, you would be paying regular annual membership fees. And if you don't pay your credit card bills in time, you will be slapped with a nightmare of charges in the names of late charges, admin charges and interest charges around 24% per annum. At such high rates, in slightly over 3 years, the interest charges will catch up with the principal amount! This is such a lucrative repeat business and it is no mere coincidence that Warren had made a huge fortune by investing in American Express Credit Card Company.

Let us look at the other side of the story. There are several companies that sell products or services people buy only once in many years. Even then, they buy different products of the same type, not really a repeat business. For example, a person in her first job after college can afford to buy a cheap 1000cc Japanese or Korean car. Her next car may be a 2000cc Japanese or American family saloon. In the height of her professional career she may be interested in buying a continental luxury car like BMW or Mercedes. Some people even if they are loyal to a same car brand, will never stick to the same model. In fact, if a car company does not change model in a couple of years, even the most ardent loyalists will switch brand. Hence the repeat business does not exist in industries such as car industry, personal computers, televisions, home appliances etc.

Business Evaluation Questions (continued)

- 12. How often would the customers purchase products or services from the company? Once in many years or frequently?
- 13. Is the company able to sell exactly the same products or services repetitively to its customers?

11. Step-6. How satisfied are you as a customer?

This step deals with your own personal experience with the company's products or services. How often do you buy the products the company sells? How about

your family members, friends and acquaintances? How satisfied are you with the products and services? Did you ever encounter any problem with the company's products? How did the company resolve the problem? And finally, will you consider using its products or services again?

Customer satisfaction heads at the top of the factors that differentiates good businesses from bad businesses. A satisfied customer means repeat business and more importantly free advertisement to the company. If we are truly happy with a product or service, we will most likely buy more of it ourselves. Furthermore, as perpetual seekers of acknowledgement, human beings always like to be seen by others as good decision makers. So, in order to win appreciation from others, we will spread our happy experience to our family members, friends, colleagues and acquaintances. The results are increased goodwill, free advertisement and more business impacting the company's bottom line and stock price positively. Sometimes, we may be delighted with some of the products or services of a company, like in the case of iProducts from Apple, which we will gladly share our happy experiences with people around us. The goodwill and free advertisement generated can result in phenomenal performance of the company's business and the stock price.

The opposite also holds good. If we are unhappy with the company's products or services, we will proceed to do just the opposite. We all know equipments fail without giving prior notice or warning. A computer can fail just before your presentation; a car can stall in the middle of a freeway; a front load washing machine can stop mid-cycle; a wardrobe failure can occur on stage (you can't entirely blame the manufacturer for this). After a failure, we almost always want to blame someone and blaming the manufacturer (of the failed equipment) somehow appears logical. In spite of the equipment failure, the manufacturer still has one chance to do damage control. That is by providing a good quality service to set the equipment in order with minimum inconvenience to the customer. And if the company's service technician does a shabby job, the matter may escalate to the service manager and if the service manager can't be bothered, then the company has just lost one client. Unfortunately for the company, the story doesn't end there.

We will not buy again products from that company due to the dissatisfaction. Furthermore, we will gladly share our bad experiences with everyone we eat a meal or drink coffee with. You might ask why we will tell everyone as there is a risk of them thinking of us as bad decision makers. Clever as we are, this time around, we will appear as innocent victims of the company. As we feel cheated by the company, we can now legitimately exercise our divine right to blame others. Our decision-making is not at fault; it is the company that failed to fulfill its obligations!

The product quality and customer service are important attributes of a company's value system. Good companies are extremely careful not to short change the customer with bad product or service. Even if the company has occasional product quality issues, the customer service should come to the rescue to remedy the situation to ensure that customers are still happy. If you, a normal customer, had a bad experience, it is most likely that many others also would have had similar experiences. Bad experience will mean less repeat business and more bad-mouthing for the company. So, the company will end up as a loser and it will show-up in your portfolio.

Business Evaluation Questions (continued)

- 14. Are you a repeat customer of the company?
- 15. Are you happy enough to recommend the company's products or services to other people?

To Summarize...

- 1. Be sure to fill-in the Brand Choice Questionnaire and Purchase Questionnaires. Watching your own purchasing habits will help you develop a keen sense of brand consciousness.
- 2. The purchasing behavior of people like us translates into revenue and profit for the companies that sell the products and services we purchase. A company that makes its customers delightful will most likely make its shareholders also delightful!
- Call your list of prospective companies for investment as 'Wait-list'. It is good to keep your portfolio tough to get into; not every company can make it.
- 4. Step-1: The Company must have a durable competitive advantage over its competitors. It must be a market leader in its industry; or it must be a consumer monopoly; or it must be a low cost producer. Companies that manufacture undifferentiated products do not qualify.
- 5. Step-2: The products & services must not become obsolete too often. Look for companies whose products & services will be relevant for a long time into the future.
- 6. Step-3: The Company's business must not depend on highly qualified labor force. Hiring, retaining, and training highly qualified workforce is very costly. Furthermore, presence of unionized labor can be a major headache for the company; powerful labor unions can hijack the company by engaging in hardball tactics such as strikes, ruining the financial health of the company.
- 7. Step-4: The Company should not be spending too much money on maintenance and R&D expenses just to sustain the current sales.
- 8. Step-5: The Company must be able to sell its wares many times over to repeat customers, like a telecom company billing a customer for the services month after month.
- 9. Step-6: Are you a satisfied customer yourself? If you are dissatisfied as a customer, then you must give the company a miss.

- 10. The first 6 steps will help you to evaluate the company's future prospects based on its business model. These steps don't require you to read the financial statements of the company. There are no quantitative criteria (mathematical formula) that will give you a signal to go-ahead with the investment. However, following these steps will force you to understand the business nature of your target companies.
- 11. Get the answers for these 15 Business Evaluation Questions to know more about the investment merit of any company. It is understandable that you may not know for sure the answers to several of them. Even if you succeed in getting answers to 75% of the questions, you are better than the vast majority of people out there.
- 12. The key here is to differentiate between high and low quality companies for investment. Identifying low quality companies and not investing in them, is the first and foremost discipline to master. Then, identifying high quality companies and investing in them will not be too difficult.

8. Finding Great Businesses Part-II (Let the Numbers Speak)

People lie, but the numbers don't

1. Financial Evaluation

Listed companies are required to present financial statements and reports at regular intervals and disclose any other matter of significance as and when they occur. The company's insiders (managers) get to decide what is significant and what is not (there are some guidelines, though) so, obviously they possess more information than the rest of the investing world. This information disparity is the ground-zero reality for all investors, big, small, retail or institutional. To avoid insiders taking advantage of this information gap, their investment activities are heavily regulated. So, we can take that the information is made available to all the outside investors almost at the same time, depending only on the speed of their Internet connections! The task now is to develop an *edge* with essentially the *same information* available at the *same time* for *all* the investors. We will see how to do it by dissecting the numbers presented in the financial statements and reports of the company.

Many a time, the stock prices do respond to fairy tales; but if the numbers don't match up with the stories, the prices will promptly fall back. So in the long run, numbers are very important. I recommend that you always consider at least the past 10 years of data for your evaluation. You might say that the past performance is not an indication of the future performance. While this is true, the information on the past performance is the *only* data available with which you can draw any conclusions about a company's future performance.

There is a good reason why evaluation of 10 years of data is recommended. Typically, economic activity occurs in cycles consisting of various phases such as Recovery, Expansion, Contraction, and Recession. Historically, each cycle will be between 4 and 6 years. So, if you consider 10 years, then there is a good chance that the data will contain financial performance of the company during the contraction and recession phases also. It is not good enough to know the company during good times; you must make an effort to evaluate the company based on data during bad times also. What you are looking for is the consistency of the numbers that allows you to predict future performance of the company. Typically, financial statements contain 'one-off' items that are non-recurring in nature. If a 10-year period is used for our evaluation, these 'one-off' effects will pose no significant problem. As I am writing this chapter, the news came of Berkshire's investment into IBM. Warren himself said that he had read IBM's annual report for 50 years before actually making this investment! So, looking for a company's performance over a period of ten years is not really too much to ask. There are four simple steps to evaluate a company based on its financials, which are listed below.

Step-7: Growing Trend in Sales and Earnings (EPS)Step-8: Debt Servicing CapacityStep-9: High Return on capitalStep-10: How does the company handle capital?

2. Step-7. Growing Trend in Sales and Earnings (EPS)

Is the company growing? Is the growth path smooth or patchy? To answer these questions, you will have to look at the historical data on the company's sales (revenue) and earnings. Growing sales is the most important measure of success for a company. Long queues outside a store are always a good sign for the owner. Having more such stores every year is growth. Sometimes companies may increase profits by merely reducing costs. While this is sensible, cost reduction cannot be relied upon for the profit growth forever. Sales growth is the only possible way share prices can increase and sustain. The earnings can be easily 'massaged' using management's discretion over accounting estimates and others. But it is more difficult to do the same with the sales figures. Furthermore, as the sales grow, the earnings per share (EPS) also must grow indicating robust profitability. Many a time companies resort to increasing sales by slashing prices (to the customers) hoping to increase market share at the cost of profitability. Such strategies cannot work forever. Based on the 10 years data, both sales and earnings must be consistently on the growth path for the company to qualify.

Recall our discussions on companies in price-competitive businesses and those with sustainable competitive advantage. The companies in the pricecompetitive businesses typically alternate between good and bad results making any prediction impossible. On the other hand, businesses with sustainable competitive advantage tend to produce consistent results. You will be able to find these remarkable differences when you actually look at their financials.

How to get the data for evaluation?

- 1. Visit GuruFocus http://www.gurufocus.com
- 2. Type in the company's stock ticker code (KO for Coca-Cola, PG for Procter & Gamble, GOOG for Google ... and click 'search')
- 3. Click on '10-Y Financials'. You will find both 'Revenue' and 'Net Income' under 'Income Statement'

Year	Sales/Revenue (in millions USD)	Earnings/Net Income (in millions USD)	EPS USD
2011	46,542.00	8,572.00	1.88
2010	35,119.00	11,809.00	2.53
2009	30,990.00	6,824.00	1.47
2008	31,944.00	5,807.00	1.25
2007	28,857.00	5,981.00	1.28
2006	24,088.00	5,080.00	1.08
2005	23,104.00	4,872.00	1.02
2004	21,962.00	4,847.00	1.00
2003	21,044.00	4,347.00	0.88
2002	19,564.00	3,976.00	0.62

 Table 8.1
 Ten-year Growth Trend—Coca-Cola (KO)

Source: Sales, Earnings and EPS Data are here presented with courtesy from www. gurufocus.com website.¹

From the above table, we can observe the following:

- 1. Coca-Cola's sales have been increasing consistently except in the year 2009 when the sales declined about 3%.
- 2. Coca-Cola's EPS also has been increasing consistently except in the years 2008 (when the EPS declined about 3%) and in the year 2011.
- 3. The decrease in 2008–2009 is not very significant, especially in the light of global financial crisis of 2008–2009 and the recession thereof. In fact, Coca-Cola has survived the effects of the crisis and the recession almost unscathed.
- 4. The EPS in 2011 appears to be much lower compared to that in 2010. There was a one-time fair value adjustment (USD 5 billion gains) in 2010 results, which resulted in abnormal increase in EPS in 2010. But for the one-time effects, the growth trajectory appears to be intact.

For comparison, we will evaluate the financials of a price-competitive company, a well-known US car manufacturer, Ford.

Year	Sales/Revenue (in millions USD)	Earnings/Net Income (in millions USD)	EPS USD
2011	136,264.00	20,319.00	4.94
2010	128,954.00	6,561.00	1.66
2009	118,308.00	2,699.00	0.86
2008	146,277.00	-14,571.00	-6.41

 Table 8.2
 Ten-year Growth Trend—Ford (F)

2007	172,455.00	-2,706.00	-1.35
2006	160,123.00	-12,700.00	-6.79
2005	177,089.00	2,202.00	1.08
2004	171,652.00	3,634.00	1.91
2003	165,066.00	921.00	0.27
2002	163,420.00	284.00	-0.54

Source: Sales, Earnings and EPS Data are here presented with courtesy from www.gurufocus.com website.²

From the above table, we can observe the following:

- 1. The sales have remained almost stagnant during the period from 2001–2007 and then deteriorated drastically during the global financial crisis of 2008–2009. In 2010 and 2011 there appears to be some improvement in sales. Even then, over the last ten years the sales have actually decreased.
- 2. The EPS have been generally erratic without a clear pattern.
- 3. The performance had worsened even before the global financial crisis.

The phenomenal earnings in 2011 had a one-time tax related gains of USD 12.4 billion. Excluding this, the earnings and EPS should be far less.

Even if you are a novice in finance and a beginner to investing, you should be able to understand the difference between the two sets of data above. From the first set of data (that of Coca-Cola), the growth in sales and earnings is very obvious. The data over the 10-year period is so consistent that it would be reasonable to predict the future performance of the company with some degree of confidence. However, from the second set of data there are no positive trends in both sales and the earnings. The data is inconsistent and erratic; it will not be possible to form a reasonable expectation of the company's future performance with any confidence.

Now, let us see what if you had only considered the three years (instead of ten years) of data of these two companies?

Year	Sales/Revenue (in millions USD)	Earnings/Net Income (in millions USD)	EPS USD
2011	46,542.00	8,572.00	1.88
2010	35,119.00	11,809.00	2.53
2009	30,990.00	6,824.00	1.47

Table 8.3 Three-year Growth Trend—Coca-Cola (KO)

 $\it Source:$ Sales, Earnings and EPS Data are here presented with courtesy from www. gurufocus.com website. 1

Year	Sales/Revenue (in millions USD)	Earnings/Net Income (in millions USD)	EPS USD
2011	136,264.00	20,319.00	4.94
2010	128,954.00	6,561.00	1.66
2009	118,308.00	2,699.00	0.86

Table 8.4 Three-year Growth Trend—FORD (F)

Source: Sales, Earnings and EPS Data are here presented with courtesy from www. gurufocus.com website. $^{\rm 2}$

In this case, the sales growth of both the companies appears to be great; and if you removed the one-time effects of Coca-Cola in 2010 and Ford in 2011, the earnings also seem to be on the growth path. You could hardly differentiate them on their three-year performances and you will not be able to fully appreciate the risks involved. There are many investors who can go about investing in stocks based on short-term expectations of companies. As this book has been written for working class retail investors who have little time to do research or watch the market, using shorter-term data almost always comes with unknown risks.

Sidetracking on IPOs

Now that you understand how important it is to evaluate the company's performance over a long period of time, would you reconsider your idea of participating in an upcoming IPO? In most cases, the IPO companies may not have stood the test of time, in particular, the recessionary impacts of the economic cycle, so there is no way an investor can form a reasonable expectation about a company's performance during the next recession. This is really very crucial if the company is in a price competitive industry.

After getting listed in an exchange, the IPO companies will have to spend additional recurring expenses related to statutory compliance, periodic disclosures and so on. Keeping all things like revenue, profit margins etc., equal between a non-listed private company and a listed company, the net profit will always be lower for the listed company for this reason. I am fairly certain that most of the working people (retail investors) have neither the ability nor the competence to read and understand over 300 pages of IPO documentation. You will never know if you are over-paying for your shares or not. Due to the absence of a long history of data on IPO companies, I would classify investing in IPO as 'speculative investments'. If you have made an asset allocation (discussed in a later chapter) for gambling and speculation, go ahead and try your luck, but stick within your allocation.

Most of the IPOs are structured in such a way that retail investors have little chance of getting IPO shares of good quality companies with decent valuation, the so called 'hot issues'. Most of these hot issues will get multiple times oversubscribed during the road shows itself leaving too little for the general public. On the other hand, if the retail investors are able to get IPO shares, it means that the investment community does not consider such issues as 'hot'. There could be two reasons for this; (1) The company may not be of good quality (2) The valuation may be steep. Both are good enough reasons to stay away from such issues.

If you can get an IPO, don't buy it. Only buy IPOs you can't get³. Dr. Vahan Janjigian Editor of MoneyMasters Stock Report

We know that bonds are more conservative instruments than common stocks in terms of risk. This is because, in the event of a company bankruptcy, the bondholders get their claims first before the common stock holders can get anything from the company. It is interesting to observe that relatively safe instruments (bonds) have rating systems from third-party rating agencies like S&P, Moody's, Fitch etc., on which investors can *rely* for making their decisions. On the other hand, common stocks, being the riskiest in hierarchy, have no such third party rating systems to rely upon. The common stock holders have to fend for themselves because *theoretically* they are the owners; but *practically* the minority retail investors have no clout or say in the running of the company. So, it would be helpful if a 'rating system of some sort' enters into the common stock arena. It would be beneficial if a rating system were made mandatory at least at the time of IPO and a few years after that. At the time of writing this book, this remains in my wish list for the future.

Financial Evaluation Questions

- 1. Is the Revenue (sales) of the company growing?
- 2. Are the profits and the EPS of the company growing?
- 3. Was there any recession during the last 10 years? If yes, how did the company perform during the period of recession?

🖙 Call for Action

Compare the growth in sales, profits and EPS of two companies Procter & Gamble (PG), a consumer monopoly company and Delta Airlines (DAL), a price competitive company. Once you have completed, PROCEED to the next step.

3. Step-8. Evaluating Debt

We borrow money from banks and other financial institutions for a variety of reasons such as mortgage loans, car loans, education loans, credit card loans and so on. A vast majority of people (the middle class) are not expected to pay in full for their primary residences nor can they afford to pay in full for the college education of their children (for a single child, may be). Borrowing money for such purposes is the only possible option. In general, the interests charged for mortgage loans and educations loans are very low. The education loans are offered on interest-free terms (government subsidies) that require repayment

only after completion of studies. In such cases, the benefits derived from taking loans is far greater than the interests paid, allowing us to build wealth.

Car loans, on the other hand, do not enable us to increase our wealth, even though the interests charged are exceptionally low. On the day you take delivery of your car, its value drops instantly around 10% and then continues its descent gradually. There is another type of borrowing that needs mention here and that is 'borrowing money to spend'. The foremost item on this list is credit card expenditure. The interests charged by the credit card companies are so steep (can be as high as 24%) that it can literally destroy wealth. At such a rate the debt will double every 3 years! ('72 divided by rate' rule).

If you are wondering why credit card loans attract high interest rates compared to mortgage loans, it is because of the lack of collateral to back up the credit card loans. For a mortgage loan, the property you are buying becomes the collateral. If you fail to make your regular mortgage payments, the bank can attach your property and foreclose the loan. However, credit card loans are unsecured without any collateral backing up the loans. This lack of collateral increases risk of loss due to default, prompting the lenders (credit card companies) to charge more interest to compensate for this risk.

a. Good Debt, Bad Debt

If you undertake a loan, you must be able to derive more returns from the loan than the interest payments. Then the loan will help you build asset and it is Good Debt. This is the way almost all assets are built. Even governments take on loans (by way of issuing bonds) to implement infrastructure projects, which then become national assets. World Bank provides low interest loans to fund many projects to alleviate poverty in many developing countries. Without mortgage loans, most of us would still be living in rental homes making the landlords richer every month. With mortgage loans, however, we all have a good chance of becoming landlords ourselves and by the time the mortgage payments are completed, the properties are ours to keep. Thus, mortgage loans actually help us build assets. When you incur credit card debt merely for spending, you will not derive any returns, but you could be paying 24–36% per annum interest to the credit card company. This debt will make you poorer and it is a Bad debt.

b. Corporate Debt

Unlike individuals, companies can raise money in three major ways viz., by issuing common shares, by issuing preferred shares and by issuing debt (borrowing money). As we have seen earlier, for common shares and preferred shares, the company is not obligated to make repayment. However, when a company issues debt (borrows money) it is obligated to make regular interest (coupons) payments and to make the final principal payment on maturity. Failure to make these payments on time may force the company into bankruptcy.

Companies undertake debt for a variety of reasons such as to enter into new markets, develop new products, build additional factories etc., By taking on debt,

if the company can derive more returns than the interest payments then the debt will help the company build more assets and it can be called a Good Debt. On the other hand, if the new debt is taken only to sustain the current operations, or to revolve current debt, then the additional debt taken will not grow any asset. In order to evaluate the debt of a company we must therefore look at two aspects (1) Debt servicing capacity (2) Wealth creating ability

c. Debt Servicing Capacity

Assume that you earn USD 5,000 a month and your spouse earns USD 4,500 a month after taxes. You have bought a new home on mortgage loan that requires a payment of USD 2,500 per month. With a combined monthly income of USD 9,500, paying USD 2,500 a month for mortgage is like a 'breeze'. After a couple of years, assume that your spouse had got retrenched and your household income had suddenly dropped to USD 6,000 (your salary had increased by 20% in the mean time). Now, paying USD 2,500 a month for mortgage is going to be a little 'squeeze'.

In spite of trying for suitable employment, your spouse can only get a job that pays him USD 3,000 a month. Here comes the Global Financial crisis, assume that you also have been retrenched (sorry for the cruel thinking) and the household income has suddenly become a meager USD 3,000 a month. When this happens, unless you have a savings back up, the monthly mortgage payment of USD 2,500 may have to be put to 'freeze'. The bank will start its proceedings to recover the loan and you may lose your house in the end. You will have to pack up your belongings and look for another place. Life still goes on!

But, for a company in the same predicament, life *does not* go on! If it could not fulfill its debt obligations, either a single interest payment or the final principal amount, it can be forced into bankruptcy. If such news ever leaks out, the company's suppliers will stop giving credit and its clients will stop making any advance payments, forcing the company's operations to a screeching halt. Normal life literally stops for the company and the shareholders of the company will lose out dearly. Therefore, while 'some debt' is very good for the company, 'too much debt' can destroy it. The question is 'What is the right amount of debt?'

To answer this question we must compare the 'total debt' (a Balance Sheet item) with the 'net earnings' from the Income Statement. In the year 2009, the long-term debt of Coca-Cola was USD 5.059 billion and the net income was USD 6.824 billion. Coca-Cola's one year's income can *wipe out* the entire long-term debt and keep the balance sheet clean. Similarly, in the year 2010, the long-term debt of Coca-Cola had increased to USD 14.041 billion and the net income also had increased to USD 11.809 billion. Slightly more than one year's income is sufficient to pay back the long-term debt in full. So, the number of years it would take to repay the total debt at the current income levels provides a good idea of a company's debt repayment capacity. To calculate the number of years, we must divide the long-term debt (LTD) by the net income (NI). Note that we are

assuming that every dollar the company earns goes back to repaying the debt without any hope for the dividends and share buybacks etc.

How to get the data for evaluation?

- 1. Visit GuruFocus http://www.gurufocus.com
- 2. Type in the company's stock ticker code (KO for Coca-Cola, PG for Procter & Gamble, GOOG for Google ... and click 'search')
- 3. Click on '10-Y Financials'. You will find 'Net Income' under 'Income Statement' and 'Long-Term debt' under 'Balance Sheet'

Year	Earnings/Net Income (NI) (in millions USD)	Long-Term Debt (LTD) (in millions USD)	Debt to Earnings Ratio Years to Repay (LTD divided by NI)
2011	8,572.00	13,656.00	1.59
2010	11,809.00	14,041.00	1.19
2009	6,824.00	5,059.00	0.74
2008	5,807.00	2,781.00	0.48
2007	5,981.00	3,277.00	0.55
2006	5,080.00	1,314.00	0.26
2005	4,872.00	1,154.00	0.24
2004	4,847.00	1,157.00	0.24
2003	4,347.00	2,517.00	0.58
2002	3,976.00	2,701.00	0.68

 Table 8.5
 Long-term Debt Servicing Capacity Evaluation—Coca-Cola (KO)

Source: Earnings and Long-Term Debt Data are here presented with courtesy from www.gurufocus.com website.¹

Note: Debt-to-earnings ratio has been calculated by dividing the long-term debt (LTD) by the earnings (NI).

From the above table, we can conclude that the debt repayment capacity of Coca-Cola is exceptionally high, as it requires only over one year to become completely debt-free. Now let us do a similar exercise with the data on Ford.

 Table 8.6
 Long-term Debt Servicing Capacity Evaluation—Ford (F)

Year	Earnings/Net Income (NI) (in millions USD)	Long-Term Debt (LTD) (in millions USD)	Debt to Earnings Ratio Years to Repay (LTD divided by NI)
2011	20,319.00	99,488.00	4.90
2010	6,561.00	103,988.00	15.85
2009	2,699.00	132,441.00	49.07
2008	-14,571.00	154,196.00	-10.58
2007	-2,706.00	168,530.00	-62.28

2006	-12,700.00	172,049.00	-13.55
2005	2,202.00	154,332.00	70.09
2004	3,634.00	172,973.00	47.60
2003	921.00	179,804.00	195.23
2002	284.00	162,222.00	571.20

Source: Earnings and Long-Term Debt Data are here presented with courtesy from www.gurufocus.com website. 2

Note: Debt-to-earnings ratio has been calculated by dividing the long-term debt (LTD) by the earnings (NI).

What you will observe in this case is in stark contrast with that of Cola-Cola. In the year 2009, the long-term debt was USD 132.441 billion and the net income was USD 2.699 billion. The automaker will require over *49 years* to pay up the debt and during all those years shareholders cannot hope to receive any dividend for holding their shares. The company's debt repaying capacity is wildly erratic; based on the data for 2002 it would take a whopping 571 years to repay the debt. Furthermore in 3 years out of the last 10 years, the ratio is negative, which means that the company has been losing money leaving absolutely no cushion against unfavorable market conditions.

So, as a general rule, companies in the price competitive business have far higher debt than companies with a durable competitive advantage. The absence of heavy debt burden, therefore more money in the war-chest, will allow a company to come out of a crisis (man-made errors or general economic downturns) situation much more easily. What problems money cannot solve? However, with heavy debt, building a war chest is impossible. Even a minor financial setback can bring the company close to bankruptcy. Then, the only way forward will be to raise equity capital by issuing more shares, which means share dilution.

Traditionally, analysts tend to use interest coverage ratio for evaluating the debt repayment capacity. Interest coverage ratio is defined as the Earnings Before interest and Tax (EBIT) divided by the interest expenses. It measures the number of times the company could make the interest payments on its debt with its EBIT. The lower the interest coverage ratio, the higher the company's risk of default will be. Anything less than 1.0 means risk of default is imminent. However, it is much safer to use the "debt divided by the earnings ratio" to evaluate the debt repayment capacity, because it is much more stringent.

d. Wealth Creation Ability

How to know if the debt is useful for the creation of wealth? For example, you have identified an investment that requires USD 10,000 with an expected return of 8% per annum. You only have USD 5,000 at the moment and you must borrow the balance. A bank offers you a loan of USD 5,000 at 5% interest. Is it a good deal? Absolutely. This loan allows you to earn a spread; to earn 8% on the loaned

amount while paying only 5% interest to the lender. But what if the bank charges you 12%? In this case, the interest rate on the loan (12%) is higher than the expected returns (8%). Taking the loan is not such a good idea. The same logic holds good while evaluating debt on companies.

Many companies issue hundreds of debt securities at varying maturities and interest rates. The good news is that we don't have to look at each and every issue. Instead we will take 'interest expenses' from the Income Statement and divide it by the total debt, to get the percentage interest. This interest rate must be less than the company's Return on Assets (ROA). We know that a company's Assets is equal to the sum of liabilities (debt) and equity. Higher ROA signifies the company's ability to derive more benefits from its investments (including the borrowed money) than the interest rates paid on the debt.

The following tables list the last 10 years data on interest expenses, longterm debt and ROA for Coca-Cola (KO) and Ford (F). The data have been taken from www.gurufocus.com website.

How to get the data for evaluation?

- 1. Visit GuruFocus http://www.gurufocus.com
- 2. Type in the company's stock ticker code (KO for Coca-Cola, PG for Procter & Gamble, GOOG for Google ... and click 'search')
- 3. Click on '10-Y Financials'. You will find 'ROA' under 'Ratios'; 'Interest expense' under 'Income Statement' and 'Long-Term debt' under 'Balance Sheet'

Year	Interest Expenses (INT) (in millions USD)	Long-Term Debt (LTD) (in millions USD)	Interest rate (INT divided by LTD)	Return on Assets (ROA)
2011	417	13,656.00	3.05%	10.7%
2010	733	14,041.00	5.22%	16.2%
2009	355	5,059.00	7.02%	14%
2008	438	2,781.00	15.75%	14.3%
2007	456	3,277.00	13.92%	13.8%
2006	220	1,314.00	16.74%	17%
2005	240	1,154.00	20.80%	16.6%
2004	196	1,157.00	16.94%	15.5%
2003	178	2,517.00	7.07%	15.9%
2002	199	2,701.00	7.37%	12.4%

Table 8.7 Wealth Creation Ability Evaluation—Coca-Cola (KO)

Source: Interest Expense, Long-Term Debt and ROA Data are here presented with courtesy from www.gurufocus.com website.¹

Note: Interest rate has been calculated by dividing the interest expense by the long-term debt.

Out of the last ten years, only in some years, the interest expenses are more than the ROA for Coca-Cola. But in general, the ROA is significantly higher than the interest expenses implying that the debt is helping to build assets for the company.

Year	Interest Expenses(INT) (in millions USD)	Long-Term Debt(LTD) (in millions USD)	Interest rate (INT divided by LTD)	Return on Assets (ROA)
2011	4431	99,488.00	4.45%	11.3
2010	6152	103,988.00	5.92%	4
2009	6828	132,441.00	5.16%	1.4
2008	9682	154,196.00	6.28%	-6.7
2007	10927	168,530.00	6.48%	-1
2006	8783	172,049.00	5.10%	-4.5
2005	7643	154,332.00	4.95%	0.8
2004	7071	172,973.00	4.09%	1.2
2003	7690	179,804.00	4.28%	0.2
2002	8824	162,222.00	5.44%	-0.3

 Table 8.8
 Wealth Creation Ability Evaluation—Ford (F)

Source: Interest Expense, Long-Term Debt and ROA Data are here presented with courtesy from www.gurufocus.com website. 2

Note: Interest rate has been calculated by dividing the interest expense by the long-term debt.

In this case, except for the latest year 2011, ROA is less than the interest expenses in all the nine previous years, implying that the debt does not appear to build assets for the company.

e. More on Debt

1. It s common to find research analysts talk about Debt-to-Equity ratios of companies. However, considering this ratio in isolation can be misleading. The reason for this can be very easily explained. The debt must be serviced in cash i.e. the payment of interest and the principal must be paid to the lender in cold cash. The equity, on the other hand, is a balance sheet item, which includes property, machinery and other intangible assets like good will of the company. These assets cannot be readily converted into cash. Furthermore, some of the assets may not even be useful to anyone else other than the company and probably its competitors; the company cannot expect a fair price for its assets from its competitors. The distress sale will always be at a steep discount to the fair price of the asset. It is for this reason, that it is safe to

evaluate the debt based on earnings capacity of the company rather than the equity from its balance sheet. In other words, the company should be able to service the loan from its future earnings and not by selling its assets.

Furthermore, Debt-to-Equity ratio will not be useful to evaluate banks and other financial companies. Typically banks have much smaller equity base compared to their debt, resulting in large Debt-to-Equity ratios. They borrow large sums of money from the depositors to lend to their borrowing clients. The major income of banks represents the interest spread i.e. the difference between interest received from their clients (borrowers) and the interest paid to the depositors. The ability to attract and make good use of depositor's money (debt) is the key to successful banking business. So, more debt is actually good for banks and financial institutions.

2. Interestingly, debt can also be used to preempt reckless behavior of the management. If a company is successful and is generating high amount of free cash flow then it may embolden the management to undertake projects in a reckless manner. The management may also venture out to buy other companies without regard to the fundamentals of the businesses being bought. The motive in such cases is to make the company bigger to justify salary increases and lavish perks for the top management. The profitability will suffer and shareholders will lose out in the end. Having a right amount of debt reduces the free cash flow in the hands of the management. Reduction of free cash flow curtails the management's ability to carry-on with irresponsible actions. Furthermore, most of the corporate debt issues require credit rating by one of the rating agencies like S&P, Moody's, Fitch etc., The rating agencies periodically monitor companies' affairs to issue ratings and thus act as watchdogs. The fear of rating downgrade will also keep the management in discipline. So, some debt is always good for the company; too much of it of course can kill.

The retails investors can also use this method of using more debt to preempt their own reckless behavior, to increase savings (investment) and to reduce expenses. This is especially true for people who are 'certified' gamblers. A simple act of buying an additional asset (e.g. a second property) on mortgage loan will reduce free-cash flow, thereby greatly reduce risk of gambling.

Financial Evaluation Questions

- 4. What is the ratio of Long-term debt (LTD) to the net income (NI)? A ratio of more than five indicates higher risk.
- 5. Is the Return on Assets (ROA) greater than the interest expenses?

Call for Action

Perform this step on two companies Proctor & Gamble (PG), a consumer monopoly company and Delta Airlines (DAL), a price competitive company. Once you have completed, PROCEED to the next step.

4. Step-9. High Return on Capital

The next question you must ask is if the company has been consistently earning above average returns. The two key measures to look for are Return on Shareholders Equity (ROE) and Return On Assets (ROA). Both ratios measure the performance of a company. We know that Assets = Equity + Liabilities; so for a company that has no debt (liabilities), its assets must be equal to its equity; then ROE should be same as ROA. If the two ratios are different, it means debt must be present; if the two ratios are *very* different, then *significant* debt must be present. Banks and financial institutions are the best examples of entities that have significant liabilities, which means their ROE and ROA will be significantly different.

The Return On shareholder's Equity (ROE) is calculated by dividing the Net Profit by the amount of equity.

Return on Equity (%) = $\frac{\text{Net Profit}}{\text{Equity}}$

If the company generates USD 10m of net income with equity of USD 100m, then the company's ROE is said to be (10m/100m) 10%

The Return On total Assets (ROA) is calculated by dividing the Net Profit by the company's total assets.

Return on Asset (%) = $\frac{\text{Net Profit}}{\text{Total Assets}}$

If the company generates \$10m of net income with an asset base of \$200m, then the company's ROA is said to be (10m/200m) 5%

The companies with competitive advantage almost always have higher ROE and ROA than the companies in pure price competitive business. Warren Buffett places great importance on the superior earnings capacity of the businesses he invests in. The consistency is the key here. Any mom & pop shop can have a few good years of sterling results and gravity defying financial performance. But the gravity that pervades this entire universe will ultimately catch up in the form of recession and other crisis, leaving only the good companies in the long run.

It is only when the tide goes out that you know who was swimming naked.

Warren Buffett

We will continue our analysis by looking at ROE and ROA ratios of Wal-Mart (a consumer monopoly company) and Delta Airlines (a company in price competitive industry)

How to get the data for evaluation?

- 1. Visit Morningstar http://www.morningstar.com
- Type in the company's stock ticker code (KO for Coca-Cola, WMT for Wal-Mart, GOOG for Google ... and so on) in the box next to 'Quote' and then click on 'Quote'
- 3. Click on 'Key Ratios'
- 4. You will see two tables viz Financials and Key Ratios. The '*Return on Equity (ROE)*' and '*Return on Assets (ROA)*' are available under the '*Key Ratios*' table.

Year	ROE (%)	ROA(%)
2012	22.45	8.39
2011	23.53	9.33
2010	21.08	8.58
2009	20.63	8.20
2008	20.18	8.09
2007	19.67	7.80
2006	21.90	8.69
2005	22.08	9.12
2004	21.83	9.07
2003	21.60	9.03

Table 8.9 Return on Capital Evaluation—Wal-Mart (WMT)

Source: ROE and ROA Data are here presented with courtesy from www.morningstar.com website. 4

- 1. What comes to your mind when you look at the ROE and ROA data of Wal-Mart?
- 2. What was the effect of the recession of 2008–2009 on the ratios?

Except in 2007, the ROE ratios have been higher than 20% and ROA ratios have been higher than 8% over the last ten years. These ratios have no semblance of recessionary periods of 2008–2009. This is the hallmark of a company with competitive advantage.

Table 8.10 Return on Capital Evaluation—Delta Airlines (DAL)

Year	ROE (%)	ROA(%)
2011	—	1.97
2010	103.85	1.37
2009	-221.09	-2.79

2008	-162.41	-23.04
2007	—	6.19
2006	—	-31.29
2005	—	-18.34
2004	—	-21.67
2003	—	-3.09
2002	-68.22	5.33

Source: ROE and ROA Data are here presented with courtesy from www.morningstar.com website. 5

- 1. What comes to your mind when you look at the ROE and ROA data from the above table?
- 2. What was the effect of the recession of 2008–2009 on the ratios?

The above table tells it all. The last thing you can observe is the consistency of numbers. The companies in pure competitive business have their fortunes tied to the roller coaster rides of the business cycles and several other external factors. Such companies operate with very little cushion to shield them from external shocks or misfortunes or genuine business mistakes. Even a single event or a potent combination of these events can bring a company close to bankruptcy or to raise additional equity capital, both of which are detrimental to the shareholders.

The following table contains information on common stock investments (partial list) of Berkshire Hathaway Inc extracted from its annual report of 2011.

Ticker	Company Name	Industry	ROE (%)	ROA (%)
AXP	American Express	merican Express Financial Services		3.29
KO	Coca Cola Food & Beverage		27.37	11.21
COP	Conoco Phillips	o Phillips Oil & Gas		8.04
IBM	IBM Corp	Software & Computer Services		13.79
JNJ	NJ Johnson & Johnson Pharmaceuticals		17.02	8.93
MDLZ	DLZ Kraft Foods Food Products		9.93	3.73
PG	Procter & Gamble	Personal & Household Goods	16.72	7.95
USB	U.S. Bancorp	Banks	16.01	1.46
WMT	Γ Wal-Mart Stores Retail		22.45	8.39
WFC	Wells Fargo	Banks	12.19	1.17

Table 8.11 Berkshire's Common Stock Investments (Partial) as of 31st Dec 2011

Source: Berkshire Hathaway Inc's annual report 2011⁶. Only US listed companies have been included ROE and ROA data are for the latest financial year and are here presented with courtesy from www.morningstar.com website.⁷

What do you notice from the above table? All, but Kraft Foods (KFT) have their ROEs above 12%. Some of the companies have ROEs of over 25%. Just to give you an idea, at a rate of 25% return on equity per year, the shareholders' equity will double every 3.1 years!

Financial Evaluation Questions

- 6. Is the ROE of the company more than 12% on a consistent basis for the past 10 years? Is the ROA more than 8% consistently over the last 10 years?
- 7. If the company is a bank or a financial institution what is the ROA? Is it more than 1% consistently?
- 8. Was there any recession during the last 10 years? If yes, how did the ROE and ROA ratios fare during the period of recession?

🖙 Call for Action

Perform this step on two companies Procter & Gamble (PG), a consumer monopoly company and Ford (F), a price competitive company.

Once you have completed, PROCEED to the next step.

5. Step-10. How does the Company Handle Capital?

We already know that a listed company can raise capital by one of three methods namely, debt, issuing additional shares and preferred shares. The combination of all these three employed by a corporation is known as capital structure.

a. Using Debt

First and foremost is debt. The company may use a bank overdraft, it can borrow from other entities, it can issue bonds or debentures, and it can also borrow from its shareholders or public at large. All forms of debt are liabilities to the company. It is mandatory for the company to pay the lenders the interest payments at periodic intervals and the principal on maturity. Failure to do so may lead to bankruptcy of the company. For example, let us assume a company takes out a loan of USD 100 million at 6% interest (paid annually) per annum for a period of 4 years. The company must pay to the lenders a sum of USD 6 million every year as interest and USD 100 million on maturity after 4 years. If the company fails to make even a single interest payment, then the company is in default and the lender can force the company to bankruptcy. The same is true if the company fails to return the principal at maturity.

b. Issuing Additional Shares

The second method of raising capital is by issuing additional shares, usually through a process known as Rights Issue. Before we move on, let us do a little recap on common stock. *The company's common stock holders are the owners of the company. They control the board of directors (by voting) who in turn control the company's management. Thus, they actually get to run the company. However, the*

company is not obligated to pay anything to the common stock holders. It may or may not pay out dividends in any given year. Let us assume that the company has 5 million shares (common stock) outstanding and you have 10,000 shares of the company. So, your stake in the company is 0.2%. It means that you are entitled to 0.2% of the company's earnings, dividends and the voting rights. If the company earned USD 5 million this year, then the Earnings Per Share (EPS) is \$1 (USD 5 million divided by 5 million shares) and by virtue of ownership of 10,000 shares in the company, you have 'earned' \$10,000.

Now back to the 'Rights Issue' to raise additional capital. The company plans to issue common shares to raise USD 50 million. It can do a 1-for-1 Rights Issue at USD 10 per share; so it will issue 5 million additional shares to raise USD 50 million in new capital. After the rights issue, the company will have 10 million shares outstanding. It means that for every share you possess, you have a right to buy a 'Rights' share; in your case, you have a right to purchase 10,000 shares at USD 10 per share. So, you must make an additional investment of USD 100,000 to subscribe in full, that is, to buy 10,000 additional shares after which you would have 20,000 shares in the company. But, since the total number of outstanding shares has now become 10 million (from 5 million before the Rights Issue), your stake in percentage terms still remains at 0.2% of the company. In spite of coughing up additional USD 100,000 into the company, you still own the same percentage of ownership in the company! Let us say, that the company still earned the same USD 5 million next year also (after the rights issue). The EPS now will be USD 0.50 (USD 5 million divided by 10 million shares) and since you have 20,000 shares now, you have still 'earned' USD 10,000 only. It is simple math, 0.2% of USD 5 million will always be \$10,000 regardless of how many shares vou have.

Suppose you only had USD 50,000 available with you at the time of the 'Rights Issue'. You can only subscribe to 5,000 shares out of the 10,000 rights. You would then have 15,000 shares in the company after the 'Rights Issue'. What happens then? Your stake in the company, in percentage terms, will drop to (15,000 divided by 10,000,000) 0.15% from 0.2%. If the company makes USD 5 million (same as in the previous paragraph) the EPS will still be USD 0.50 and since you only have 15,000 shares, your share of the earnings would have dropped to USD 7,500 from USD 10,000. This is a loss to you as a result of the 'Rights Issue'. *This is the first reason why you must avoid companies that issue more shares*. This is why I call the 'Rights issues' as 'Obligation issues' as they are really *financial obligations*; you must pay more money to exercise your 'rights' in order to maintain your percentage shareholding in the company. Failure to come up with cash will result in share dilution for you. It is therefore, more of an obligation than a right!

c. Issuing Preferential Shares

The third method of raising capital is by issuing preferential shares. The company is not obligated to pay anything in return to the preferred shareholders; but the company must pay the preferred dividends to the preferred shareholders before paying any dividend to its shareholders. This is good for the shareholders because of two reasons:

- □ There is no share dilution as in the case of raising equity capital via 'rights issue'
- □ There is no obligation for the company to pay to the preferred shareholders. So, there is no threat of bankruptcy as in the case of 'debt'

In reality however, such a 'cure-all' remedy does not come cheap. In order to entice the investors to invest in preferred shares, company must offer one or both of the following:

- □ The company may add a conversion option. It means that the preferred shareholders will have an embedded option to convert their shares to common stock. This gives rise to 'share dilution'.
- □ The company may add warrants to sweeten the deal, which will also result in share dilution.
- □ The preferred dividend offered will be generally more than the interest on the 'bond'.

d. Debt Vs Rights Issue (Common Shares)

Among the three methods that have been discussed above, debt and rights issue (equity capital) are the most common methods used by companies for raising capital. So, we will focus our attention to compare them using a scenario. Stop reading NOW. Arm yourself with some paper, pencils and a calculator. Once you are ready, we will get into some number crunching to find out if Debt or the Rights issue is beneficial to the shareholders.

At time zero, the company earns USD 5 million with 5 million shares outstanding. The Earnings Per Share (EPS) is USD 1 (USD 5 million divided by 5 million shares). Let us say that the company has identified a number of new prospective projects that require additional funding of USD 50 million. The new projects have a Return on investment (ROI) of 10%. The company has two choices

- 1. Taking a debt for USD 50 million
- 2. Issuing 5 million common shares at USD 10 per share to the existing shareholders (Rights Issue).

For the sake of simplicity, we assume that the new projects do not in any way affect the existing streams of income. So, we will assume that the company will continue to earn USD 5 million (after-tax) annually from its existing business.

Let us assume that the company took on a debt (loan) for USD 50 million at an interest of 6% per annum. It still has 5 million shares outstanding and you still have the initial 10,000 shares in the company that translates to 0.2% stake. The USD 50 million loan is put to use at a return of, say 10%. By the end of the year, the company should have earned additional USD 5 million in profits. (USD 50 million *10% returns = USD 5 million). It must pay USD 3 million in interest payments (USD 50 million*6% interest on the loan) to the lender. The profit is USD 2 million before tax. Assuming a tax rate of 20%, the after-tax income is USD 1.6 million. Adding USD 5 million from the existing business, the total after-tax income is USD 6.6 million. The EPS will therefore be USD 1.32 (USD 6.6 million divided by 5 million shares). Since you own 10,000 shares in the company, your claim in the company's earnings is USD 13,200 (10,000 shares*USD 1.32).

Let us consider the 'Rights Issue' scenario. The company does the 'Rights Issue' to raise USD 50 million by issuing 5 million additional shares at USD 10 per share. You have paid USD 100,000 to receive your entitlement of 10,000 rights shares. In the end, the company has 10 million shares and you have 20,000 shares representing a stake of 0.2% in the company. The USD 50 million additional capital received by selling the shares is put to use at a return of, say 10%. As in the previous case, by the end of the year, the company should have earned additional USD 5 million in profits. After paying 20% corporate tax, the after-tax income from the new projects is USD 4 million. Adding USD 5 million from the existing business, the total after-tax income is USD 9 million. The EPS will therefore be USD 0.90 (USD 9 million divided by 10 million shares). In this case, since you have 20,000 shares in the company, your share in the company's earnings is USD 18,000 (20,000 shares*USD 0.90)

You will earn USD 4,800 more (USD 18,000–\$ 13,200) under the 'rights issue' scenario. However, you would have to part with a princely sum of USD 100,000 to fully subscribe to your 'rights' shares. So, what is the actual return on your investment? It is a meager 4.8%, (USD 4,800 divided by USD 100,000) which is even lower than the interest on the debt. Is it worth for you as a share investor?

What if you did not have the USD 100,000 and could not subscribe to the 10,000 right shares? In this case, you will only have 10,000 shares after the 'Rightsissue' even though the total number of shares had become 10 million. Your share holding in the company will be diluted to 0.1%. At the end of the following year when the EPS became S0.90, your share in the company's earnings is USD 9,000 (10,000 shares*USD 0.90). The 'rights-issue' had just made you poorer. You are obligated to cough up more cash, or else, get your stake diluted.

I am sure you recognize the assumptions we had made in the above illustration. The first assumption is the price of the rights share at USD 10 per share. Second assumption is the 10% return on investment (ROI) for the new projects. The third assumption is 20% corporate tax. If you made changes to the above assumptions, then your results may vary. But the above illustration should help you to evaluate a real-life 'rights issue' you will come across in your investment journey.

If the company's earnings are good and consistent, a 'right' amount of debt will always be beneficial to the shareholders due to the effect of leveraging and the tax benefits on debt. On the other hand, any increase in the number of shares outstanding will always come with a dilution effect, which is detrimental to the shareholders.

You might ask, if debt is beneficial, why don't all companies use more debt and less equity? The answer is simple and direct to the point. Yes, the companies will always be happy to use more debt if it is possible to get it cheap. The problem is, the cost of debt goes up in tandem with the amount of debt and vice versa. So, at some point, any additional debt will become prohibitively expensive. Many companies find their debt avenues all but shut before looking at equity options (rights issues). Although, it seems like a general statement, it is true. But the reason for this need not necessarily be the perceived credit risk of the company alone. It could also be due to macro reasons such as deteriorating economic climate, increased risk aversion etc., It is for this reason that if a company issues a large debt (takes on loan), the stock market perceives this as a positive sign and responds with higher prices for the company's stock. On the other hand, if the company announces a Rights Issue, the stock market responds with sharply lower prices for the company's stock.

Company issuing additional shares is ALWAYS BAD for the existing shareholders. Rights issues are really Obligation issues. If you are unable to fulfill your obligations, you may end up poorer.

e. Other Side of the Coin – Buying Back Shares

Look for companies who consistently buy back their own shares from the market to reduce the total number of outstanding shares. When the total number of shares is decreased, your stake in the company in percentage terms will increase and this is amazing. Currently you have 20,000 shares and the company has 10 million shares outstanding; your stake in the company is 0.2%. If the company can afford to buy back from the market, say 2 million shares, then the number of shares outstanding would be reduced to 8 million shares. Your stake will then increase to (20,000 divided by 8 million shares) 0.25% without a single cent contribution from you. After this, you are entitled to 0.25% of the company's future earnings, dividends and voting rights. And this is not a one-time benefit. Many companies pay special dividends when they receive one-off gains or unusually high bumper year profits. These special dividends are usually one-off type, the benefits of which will not recur into the future. However, if the companies buy back their own shares from the market instead of paying special dividends, the benefits are perpetual.

Sometimes, companies do resort to buying back its own shares just to offer them as part of the compensation packages for their top executives. Such share buy backs do not qualify. You must look for companies that buy back their own shares thereby reducing the total number of outstanding shares in their respective companies. Some companies may buy its own shares to provide *artificial support* to the stock prices; perhaps to allow the key executives sufficient time to exercise their stock options and sell the shares.

While on this subject, we will focus our attention on *stock options* granted to key executives of listed companies. Stock options are used to attract and retain the best talent available while aligning the interests of the company executives with that of the shareholders. However, in many Employee Stock Option plans (ESO plans), the optionees (option holders) are allowed to sell their shares as soon as they exercise them. This idea directly *undermines* the principle of *'aligning*

the interests with that of the shareholders'. Having a vesting period for exercising the options is inadequate because the payoffs of the shareholders and that of the option holders are obviously very different; in the worst case scenario, (out-ofmoney options i.e. share price lower than the exercise price) the option holders may let their options expire without a sweat. They have nothing to lose. Under the same circumstances, the shareholders stand to lose dearly.

This system may be improved by imposing a mandatory ban (for a few years) on selling the shares received after exercising the stock options; in this way, the 'alignment of interests' is ensured at least during those years of ban. This is in my wish list for the future.

Company buying back its own shares with the objective of reducing the total number of outstanding shares (without any other hidden agenda), is POSITIVE for the existing shareholders.

f. Analysis

How to know if a company has been issuing additional shares or buying back its own shares?

How to get the data for evaluation?

- 1. Visit Morningstar http://www. morningstar.com
- 2. Type in the company's stock ticker code (KO for Coca-Cola, WMT for Wal-Mart, GOOG for Google ... and so on) in the box next to '*Quote*' and then click on '*Quote*'
- 3. Click on 'Key Ratios'
- 4. You will see two tables viz Financials and Key Ratios. The 'Long-term Debt (LTD)' will be under the 'Key Ratios – Financial Health' table and 'Shares outstanding' will be available under the 'Financials' table.

Year	Long-Term Debt (LTD) in \$ Billions	Shares Outstanding (in Millions)
2011	11.41	2,775
2010	8.90	2,789
2009	8.68	2,789
2008	9.56	2,836
2007	8.74	2,913
2006	2.85	2,963
2005	3.48	3,009
2004	4.81	2,996
2003	6.12	2,999
2002	4.99	3,054

Table 8.12 Capital Structure Evaluation—Johnson & Johnson (JNJ)

Source: The Long-Term debt and the Shares Outstanding Data are here presented with courtesy from www.morningstar.com website.⁸

From the above table we can observe that Johnson & Johnson's long-term debt has been rising. Although the debt has increased more than 2 times over the last 10 years, it is only slightly more than 2011 earnings of \$9.67B. Moreover Johnson & Johnson's number of shares outstanding has been falling that implies the company has been buying back its own shares. Both are good news for the shareholders. Let us now do the evaluation on United Continental Holdings (airlines company), which is in a price competitive industry.

Year	Long-term Debt (LTD) in USD Billions	Shares Outstanding (in Millions)
2011	27.63	383
2010	28.88	253
2009	34.14	151
2008	30.87	127
2007	26.49	144
2006	29.38	173
2005	6.71	116
2004	0.74	113
2003	-	103
2002	2.96	60

Table 8.13 Capital Structure Evaluation–United Continental Holdings (UAL)

Source: The Long-Term debt and the Shares Outstanding Data are here presented with courtesy from www.morningstar.com website.⁹

From the above table, it can be noted that the long-term debt has increased far too much compared to the net income. In 2011, the debt stands at USD 27.63 billions whereas the income is only USD 800 millions (debt is 34 times the net income). Moreover, the number of shares outstanding has increased to more than six times in the last 10 years. It appears that the company, in spite of having very high debt levels, also had to raise equity capital by issuing additional shares, which means share dilution. This is the hallmark of the companies in price competitive business segment.

Financial Evaluation Questions

- 9. Over the last 10 years has the company been issuing more shares? or buying back its own shares?
- 10. Does the long-term debt increase or decrease over the last 10 years?

🖙 Call for Action

Perform this step on two companies Procter & Gamble (PG), a consumer monopoly company and Delta Airlines (DAL), a price competitive company. Once you have completed, PROCEED to the next step.

6. Additional Debt vs Equity (Another Viewpoint)

Let us digress a bit to look at a social issue. As a person of Indian origin, I would like to relate how most Indian families used to raise capital in the past. Those were the times when the conventional money lending systems like banks didn't exist. This method of raising the capital gripped the entire country for several centuries and it is still prevalent in most parts of India. The method of raising capital I am talking about here is the 'dowry' system.

Let us now see how the dowry system is used for raising capital. It can be very easily explained. The parents of the groom spend money to educate him, to train him in a trade, making him capable of earning a living. In modern terms, this is equivalent to an entrepreneur starting up a private company, developing a product or service and bringing the company up to speed for an IPO. The parents of the groom are now in the lookout for a prospective bride for their son. They spread news through word of mouth to their dear and near. This is equivalent to the entrepreneur doing road shows to the investment community to generate interest in his company's IPO. The parents then receive many proposals for marriage from the families of prospective brides. The bridegroom and his family visit the bride's home to see the bride and her family. If both parties are happy then they talk about the dowry and come to an agreement. This is equivalent to the entrepreneur negotiating with many investment banks to decide on the lead underwriter and the IPO amount. The wedding takes place and the dowry amount changes hands. This is equivalent to the actual IPO and the entrepreneur gets a handsome reward from the IPO proceeds.

A major portion of the dowry could be in gold and other properties, which the groom's family can use to meet any financial emergencies. The wife has thus become an equity owner in the marriage. *This is equivalent to the company being in possession of the IPO funds, which it could use for its future expenses. The shareholders of the company are the equity owners of the company.*

Some years have passed and the family has now become big with many children. Now, if the family faces a financial emergency, how would it raise additional capital? *This is equivalent to the company, now a listed company, seeking additional capital to meet certain financial obligations or to meet certain growth objectives.*

The family has two choices, one is to take on debt and the other is equity. If the family is able to manage with additional debt, the *equity holder (wife)* is happy. If the family could not borrow money, what happens then? The family tells the wife to bring in more money (additional dowry) from her parents. The request also comes with a threat. If she can't bring the required money (additional equity capital), she can't come back home to live with her husband. In order for her to maintain her *stake* in the marriage, she must put in additional money. A perfect 'Rights Issue' (obligation issue) is on the works and it does not benefit the poor equity holder! *Note:* The Indian Government had passed the Dowry Prohibition Act in 1961¹⁰ that prohibits the request, payment or acceptance of a dowry. Then why am I writing this in 2011, 50 years later?

7. Share Splits and Consolidations

While on this subject, we will discuss two common corporate actions we regularly come across that affect the total number of outstanding shares. They are Share-splits and Share-consolidations.

a. Share Splits

Let us assume that a company has 1 million shares outstanding and it announced 1 to 1 stock split. After the split, the company will have 2 million shares outstanding instead of 1 million. It means that if you had 10,000 shares in the company before, you would have 20,000 shares after the split. The EPS and the stock price should become 50% of the pre-split values. Your ownership in the company will be 1% *before and after* the stock-split, because multiplying the numerator and denominator by the same number does not affect the value of the fraction. It is like changing a USD 10 bill into two USD 5 bills. The value does not change in anyway at all. But, market during the Dot Com bubble behaved as if two USD 5 bills were some how superior to a single USD 10 bill. The companies that did stock splits saw their stock prices spiral high up prompting them to do many more stock splits. The rationale for doing stock splits are: (1) to improve liquidity, (2) to keep stock prices affordable to small investors.

The increased liquidity can be easily demonstrated. With two USD 5 bills obviously you have more paper floating around than a single USD 10 bill. So, the higher number of outstanding shares increases the liquidity, which can reduce the spreads between bid-ask prices resulting in lower trading costs.

In countries where a single stock can be bought or sold, affordability is not a big issue except when it comes to companies like Berkshire Hathaway, Google, Apple etc., In case of Berkshire Hathaway (BRK-A) the price of a single share is more than USD 120,000 – too steep for most retail investors. To make it affordable for small investors, Berkshire issued Class-B shares (BRK-B) that trade around USD 80 price range, (at 1/1500 value of the original share) which also resulted in higher liquidity and affordability.

In some jurisdictions, there is a 'lot' system, whereby shares can be bought or sold only in fixed minimum quantities. One lot could mean 1000 shares for a company-A; 10 shares for another company-B. If someone wants to buy or sell shares in Company-A, she must do so only in multiples of 1000 shares; similarly for Company-B, in multiples of 10 shares. Assuming the share price of Company-A at USD 18, the minimum cash requirement for a prospective buyer is USD 18,000, which is out of reach of many small investors. In order to entice these investors, the company may resort to share splits. The lot systems were built in the early days for easy handling of the physical share certificates. But with the advent of scrip-less share trading, the lot system has no real significance. By merely removing the lot system, frequent share splits can be easily avoided in the future. Furthermore, some of these high priced stocks may also be high quality stocks, which get shut out of the realm of small investors because of the lot system. These small investors then end up investing in low priced high risk 'penny stocks'. Doing away with the lot system will leave the field even for all the investors, big or small (this is another item in my wish-list).

b. Share Consolidation (Reverse Stock-split)

The share consolidation is the exact opposite of share splits and for this reason also called as reverse stock-splits. Let us assume that a company has 5 million shares outstanding and it announced 5–1 stock split. After the split, the company will have 1 million shares outstanding instead of 5 million. It means that if you had 50,000 shares in the company before, you would have 10,000 shares after the split. The EPS and the stock price should become five times the pre-split values. Your ownership in the company will be 1% *before and after* the stock-split. It is like the company taking five USD 2 bills and handing out one USD 10 bill. There is no change in the share ownership in any way. As we has seen earlier, share splits come with increased affordability and liquidity. By virtue of being opposite to share splits, the share consolidations must result in decreased affordability and liquidity. In spite of this, why would a company do stock consolidation? Actually I don't know, however I can hazard a guess. It may be that the management 'likes' (just to satisfy the egos) to see their stock trade in a higher price range or it doesn't want its stock called as a penny stock.

Stock splits and consolidations do not have much significance in terms of percentage ownership. However, the share-splits come with some benefits in the form of increased affordability and increased liquidity resulting in reduced trading costs. So, market often responds with high prices on news of stock splits and low prices on news of stock consolidations.

8. How to Find Companies for Evaluation?

A quick look at Reuters website reveals that there are over 10,000 US stocks and over 35,000 international stocks, so it is not an easy task to evaluate each one of them individually. We can go on doing this task for the rest of our working lives and still we will not able to complete even 1% of the list. So, we must look for a short cut to make this task quicker and easier.

a. The first and foremost tool, which we can consider, is the use of a stock screener. Stock screeners are software programs that screen all the stocks listed in a stock exchange and return a list of fewer stocks that satisfy a set of criteria. They are extremely powerful, fast and easy to use. Some of the common ones for screening the US stocks are listed below:

GuruFocus – <u>http://www.gurufocus.com/screener/</u> Google – <u>http://www.google.com/finance#stockscreener</u> CNBC – <u>http://cnbc.com</u>, Click on 'Investing' and then click on 'Stock Screener'

As of writing this book, the following criteria in the Google Stock screener yielded 44 stocks, which can be a good starting point for our analysis.

-	Return on equity (5 yr avg) (%)	- Minimum	15%
-	Return on assets (5 yr avg) (%)	- Minimum	10%
-	Operating Margin	- Minimum	20%

- 10year EPS growth rate

- Market cap

- 10year revenue growth rate
- Minimum 8%
 - Minimum 5 Billion

- Minimum 8%

You may also copy the results from the webpage to a spreadsheet and perform 'sort' functions to order the data.

To screen US and international stocks, you may use Reuters stock screener at <u>http://www.reuters.com</u>, click on 'Stocks' under 'Markets' tab, and then click on 'Stock Screener'. There are five predefined screens, but I find 'Growth at a reasonable price (GAARP)' more useful than the others for our purposes.

Stock screeners are also available in the websites of some of the brokerage companies. In Singapore, Phillip securities' website <u>http://www.poems.com.sg</u> allows its clients to do screening of stocks listed in US (NYSE, Nasdaq, AMEX), Singapore (SGX), Malaysia (KLSE), UK (LSE), Hong Kong (HKSE), Japan (TSE) and Thailand (SET). I did a stock screening on Singapore listed (SGX) stocks with the following criteria:

-	Return	on	equity	(%)	- Minimum	15%
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- Return on assets (%)

- Minimum 10%

- Operating Margin (%)
- Minimum 20%
- EPS growth
- Minimum 5%
- Revenue growth
- Minimum 5%

The stock screener returned with a list of only 10 companies, which is not a lot. You must always remember, it is possible that we will miss many good companies if we put very stringent conditions for the stock screener. But this is a compromise we will have to live with.

You can also use the screener to select companies that are selling cheap compared to the earnings and the book value. As a starter, you can try this

- P/E ratio Maximum 8
- P/BV ratio Maximum 2

Such a selection would give the 'value' bias to the initial list from which you can proceed with the 10-step analysis.

b. The second source of good companies can come from the list you had made while doing the 'brand consciousness' exercise (in Chapter 7). These are the companies that you come across everyday as their

customer. If you are happy as a customer there will be several people like you; if you are delighted as a customer, there will also be several people like you; if you are upset as a customer, there will still be several people like you. These collective consumer experiences ultimately translate into profits and losses for the companies. You can't go very much wrong if you selected only the companies that gave you the best overall experiences as a customer. Then you only have to watch the price you will pay. You can start the 10-point analysis on these companies before adding some of them into your wait-list.

c. You may also frequently take a look at the portfolios of great investors such as Warren Buffett at www.gurufocus.com. This does not mean you will go ahead and buy these companies as soon as you see them in the portfolios of these investors. You must still go through the 10-step analysis on these companies before putting them in your wait-list.

To Summarize...

- 1. Evaluation of financial data of companies must be done for a period of 10 years or more. If you must use less than 10 years worth of data, then at least make sure it contains the data for a recession year. If there was no recession during the entire period, then the data cannot be used for evaluation.
- 2. Step-7: The sales, profits and the Earnings per share (EPS) must be increasing steadily. It is all right if the numbers dropped in the years of economic contraction. But, as soon as the economy recovered the numbers must start to increase.
- 3. Step-8: It is good to have some debt as it provides the leveraging effect to the shareholders. However, too much debt can destroy the company. As per Warren, companies with very high long-term debt are not safe as they are more vulnerable in unfavorable economic conditions.
- 4. Debt-to-Equity ratio should not be used in isolation to evaluate the debt position of a company.
- 5. Debt also helps to preempt reckless behavior of a company's management. Having the right amount of debt reduces the free cash flow in the hands of the management. Reduction of free cash flow curtails the management's ability to carry-on with irresponsible actions like acquisition of low quality companies. This concept is more apt for retails investors who are 'certified' gamblers. A simple act of buying an additional asset (e.g. a second property) on mortgage loan will reduce free-cash flow; thereby greatly reducing the risk of gambling.
- 6. Step-9: The Return on Equity (ROE) and the Return on Asset (ROA) must be consistently high for the prospective company. If these numbers had faltered during the years of recession, they must ascend

right back as soon as the economy picked up steam. This quality will differentiate companies with competitive advantage from the ones in the price competitive ones.

- 7. Step-10: Does the company resort to 'rights issue' every time it needs additional capital or is it capable of accessing debt market for its cash needs? The number of shares outstanding must be either constant or it should be dropping. If the number of shares had increased because of share-splits alone, then it is not something you need to worry about.
- 8. If the company buys back its own shares consistently, then it is positive. But bear in mind, companies do resort to buying back its own shares just to offer them as part of the compensation packages for their top executives. Such share buy back operations do not qualify as positive for the shareholders.
- 9. Share splits do not have more economic significance than having 5 number of USD 2 notes in place of 1 number of USD 10 note. The share consolidation is just the opposite of share splits. However, in reality, share splits offer greater liquidity and affordability of share purchases. For this reason, the market often responds with high prices on news of stock splits and low prices on news of stock consolidations.
- 10. Stock screener is a fast way of finding companies that meet your screening criteria. Bear in mind, stricter criteria will result in fewer companies meeting them; therefore you will have a shorter list to start with and vice versa.
- 11. The list of companies that you had prepared when you did your brand consciousness exercise can serve as a great starting point for analyzing the companies.
- 12. You can also visit websites such as GuruFocus.com from time to time to monitor the transactions of great investors such as Warren Buffett and then perform your own 10-step analysis on the companies before putting them in your Wait-list.
- 13. In this chapter, there are 10 questions to be answered that are spread over 4 steps to analyze the financials of the company. These 4 steps can be done without having to make any subjective judgments. If you do not have any shares in the company you are analyzing, you can be ruthlessly objective with your analysis. However, if you are doing this analysis after purchasing the shares, you may not have the required objectivity. Our inherent nature 'to be right' will kick-in to sabotage the intended effort.
- 14. The company must make the grade in order to enter into your wait-list. You never have to rush to buy into any company. You must understand that the process is indeed time consuming; but even if you take a week (or a month initially) to analyze one company, you are doing great.
9. Stock Valuation

(Within 15 Minutes)

The challenge, of course, is the calculation of intrinsic value. Present that task to Charlie and me separately, and you will get two different answers. Precision just isn't possible.

Warren E Buffett

Chairman's letter, Berkshire Hathaway Annual Report 2010¹

1. How Much to Pay?

Now that you have your wait-list of great companies, the only question that remains to be answered is how much are you willing to pay for the shares. You may have found some of the world's best-run companies with unbeatable competitive advantages in their respective industries earning monopoly like profits year after year. But it is more than likely that you will find their stock prices at all-time highs. Just because a company is great does not mean its stock is great. You may call a company great because of any number of reasons such as adorable products, great service etc., but if its share price is too high in relation to its earnings, the stock cannot called as great. So, the quality of the company and the stock price are two different aspects of stock investing. In order for you to buy, both the company and the stock price must be great.

Assume that you are thinking to replace your old LCD TV with a LED Smart TV. And you have settled on a particular brand, but the price is not to your liking. Say, it costs USD 2500 but you can only afford USD 2000. You have two choices, either you buy at the current price or wait for a sale. You also know, that if you waited long enough, the prices will eventually drop, as with most consumer electronics goods. But, if you went ahead to buy at the current price, you fear that the price will drop the next weekend itself. To add to your embarrassment, your neighbor would have bought it at *your* low price! How many times this has happened to us? Buying or not buying the TV is your prerogative. But, do you really know what is the value of a TV? If you bought it in a sale, it must be a good deal. If you had bought it cheaper than your neighbor, it sure is a good deal. But, there is no way you can possibly attach a value to a TV because it is very subjective.

Unlike TVs, the common stocks can be relatively easily valued even though the process may still contain some subjective assumptions. It is really ironic therefore to find ourselves fairing very well while purchasing stuff like TVs for which there is no valuation techniques available; but do pretty bad buying stocks even though there are several techniques available for their valuation. Obviously, the problem is not due to the lack of good techniques, it is perhaps due to our laziness to use them consistently. This book has been written specifically for working class retail investors who typically do not have the luxury of time unlike full-time professionals. So, I am very careful in providing only a few simple, yet powerful strategies that can be used with minimum amount of time and effort.

2. Valuation Template

By the time you leave this chapter, you would have constructed a fully functional template (Microsoft Excel[®] spreadsheet based) for valuing the stocks of listed companies. Step by step procedure and formulae have been provided along with theoretical explanations for easy understanding. Note that the making of the template is a one-time effort. Once constructed and tested, you can make use of it repetitively. The picture of a typical template is below.

Stock valuation Template Rev-0		Date		
Sr No	Item Description	Value	Stock	Coca-cola (KO)
A	Risk Free rate (RFR)	4%		
В	Equity Risk Premium (ERP)	6%	1	
1	Beta	0.51	1	
2	Operating cash flow for the current year	\$9,474.00	in Millions	
3	Total Number of Shares Outstanding	4542	in Miilions	
	EPS Data for 10	years	-	
	YEAR	EPS (in dollars)	No of years	Growth
4	2011	\$1.88	7	10.75%
5	2010	\$2.53	6	18.36%
6	2009	\$1.47	5	9.83%
7	2008	\$1.25	4	7.96%
8	2007	\$1.28	3	11.64%
9	2006	\$1.08	2	8.35%
10	2005	\$1.02	1	10.87%
11	2004	\$1.00	\$0.92	
12	2003	\$0.88		
13	2002	\$0.62		
		1	Growth (g)	11.11%
		EPS	1	Cash Flow
	Farnings (F)	1.88		\$2.09
	Crowth (a)	1.00	11.110/	\$2.05
	Growth (g)		11.11%	
	Discount Rate (r)		7.06%	
	YEAR	Discounted	No of years	Discounted Cash
	2012	\$1.95	1	\$2.16
	2013	\$2.02	2	\$2.25
	2014	\$2.10	3	\$2.33
	2015	\$2.18	4	\$2.42
	2016	\$2.26	5	\$2.51
	2017	\$2.35	6	\$2.61
	2018	\$2.44	7	\$2.70
	2019	\$2.53	8	\$2.81
	2020	\$2.63	9	\$2.91
	2021	\$2.72	10	\$3.02
	2022	\$2.83	11	\$3.14
	2023	\$2.93	12	\$3.26
	Intrinsic value range	\$28.95	and	\$32.12
	Average		30.54	

My goal is to accomplish the valuation of a company's common stock within flat 15 minutes. After all, the attention span of an average adult is said to be around 20 minutes, so let me make the best use of it and hope to complete the valuation of a company well within that time. Let us first make a list of the minimum number of inputs that are required for the valuation of Company. For a particular market you will have to enter only 13 data variables for a company, which have been *shaded* in the valuation template. The table below lists those data variables for a US listed company along with the possible free source for the data.

Sr No	Required Data	Possible Source
1	Beta	MSN Money, Google Finance, Yahoo Finance
2	Operating cash flow (current year)	GuruFocus, MSN Money, Morningstar
3	Total number of shares outstanding	GuruFocus, Morningstar, MSN Money, Google Finance
4-13	EPS data for 10 years	GuruFocus, MSN Money, Morningstar

Table 9.1	List of the data	required
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If you happen to find different numbers from different websites for the same data, then it is better to *err on the safe side*. Take the highest beta, highest number of shares outstanding, lowest operating cash flow and lowest EPS data. Having said, the differences should not be too far apart, most often they could be the results of rounding off. You may also double check with the company's financial statements, which can be downloaded from the Securities Exchange Commission's website http://www.sec.gov/edgar.shtml. With this said, we will move on to construct the valuation template in the following sections.

3. Time Value of Money

Time Value of Money (TVM) is an important concept you must understand for valuing a common stock. Let us imagine that you intend to buy a refrigerator at a cost of USD 1000. You visited two shops and both are willing to sell you at the same price. However, the first shop requires you to pay cash at the time of purchase, whereas the second one offers you one-year credit. This means you could take delivery of the refrigerator today and pay the USD 1000, one year later. Which one is good for you? You can intuitively say that the second shop offered you the best deal. We will see the theory behind the intuition.

Let us assume you have your USD 1000 sitting in a bank earning 5% interest. If you took the offer from the first shop, you must withdraw the money from your account and pay the shop at the time of your purchase. However, if you took the offer from the second shop, you can leave your money in the bank to earn an interest of USD 50 (USD 1000*5%). Your bank balance would become USD 1050 after one year. But, you only have to pay USD 1000 to the second shop leaving you with a surplus of USD 50. This means USD 1050 after one year

(future cash flow) is equal to USD 1000 at present, which can be mathematically written as (USD 1050 divided by [1+interest rate] = USD 1050 divided by 1.05 = USD 1000)

We will now consider a multi-year scenario. Let us assume that you had loaned an amount of USD 6,000 to your colleague and he had promised to return the amount in 3 equal installments of USD 2,000 each year. The prevailing market interest is 4% and is expected to remain so for 3 years. We will now calculate the present value of the three cash flows by discounting them at 4%. The installment received after the 1st year is worth.

Present Value (PV) = $2,000/1.04 + 2,000/(1.04)^2 + 2,000/(1.04)^3$ = 1923.08 + 1849.11 + 1777.99= USD 5,550.18

As we have seen, the cash flows of USD 2,000 per year for 3 years is only worth USD 5,550.18 at present. Even though you would have received the full amount of USD 6000 at the end of the three years, the present value of it is worth less by USD 450.

The above scenario illustrates the concept of the time value of money. What we have seen is that the future cash flow is worth less at the present time. The 'time value of money' concept allows us to calculate the value of a future cash flow at the present time. This is one of the fundamental concepts that you must understand when you set out to make valuation of any cash flow producing asset.

4. Discounted Cash Flow (DCF) Method

The value of an asset lies in its ability to generate future cash flows. In order to know the value of the asset, we must be able to calculate the value of those future cash flows at the present time. We know that the stock ownership entails a series of future cash flows. If you want to buy a stock today, you must know the present value (PV) of its future cash flows to know if it is under priced, over priced or fairly priced. Discounted cash flow (DCF) method is one of the many methods available to calculate the intrinsic value of a stock by discounting its future expected cash flows to the present time.

In the previous example, the cash flows were constant at USD 2,000 every year which we had discounted using the bank interest rate of 4%. In the case of a common stock, however, the cash flows are assumed to be increasing at the growth rate. And we cannot use the bank interest rates to discount the cash flows because the stock investors require additional compensation for taking risks in stock investing than the risks borne by the bank depositors. So, the formula for calculating the value of the stock can be expressed as below:

Value = E * (1+g)/ (1+r) + E * (1+g)²/(1+r)² + ... + E*(1+g)^{∞}/(1+r)^{∞}

where, E = Earnings per share (EPS) or Operating Cash Flow per share

g = future growth assumption

r = discount rate

Note that in the above equation, there are two values for 'E', namely the EPS and Operating cash flow per share. Almost always, these two numbers will be different yielding us two different intrinsic values. From these two values we will be able to get a range for the intrinsic value rather than a single number. After all, our purpose here is not to spend too much time or effort in calculating *The True Intrinsic Value*. We are only interested in finding a ballpark figure. To do this, we basically require four variables viz (1) the current EPS (2) current operating cash flow per share, (3) EPS growth rate (g) and (4) discount rate (r). The current EPS can be taken directly from one of the websites. The other three variables need to be calculated.

5. Operating Cash Flow Per Share

The operating cash flow per share can be calculated by dividing the operating cash flow by the total number of shares outstanding. This is the first step in the construction of our valuation template. We will be using the data of Coca-Cola (KO) as an example. Open a new Microsoft Excel[®] spreadsheet and enter the following:

Cell C6: Enter the value '9474': operating cash flow in millions Cell C7: Enter the value '4542': shares outstanding in millions Cell E23: Enter '=C6/C7': you must see the value as USD 2.09

Source: Operating cash flow and shares outstanding are here presented with courtesy from www.gurufocus.com website.²

In cell E23, you must see the value USD 2.09 (rounded-off to 2 digits), which is the operating cash flow per share. Then, highlight (light shade) the cells C5, C6, C7 and C10–C19, indicating that these are *only required data* on a company to do valuation. Now save the spreadsheet as 'US stock valuation template'. You will require a different template for valuing companies in different markets.

6. EPS Growth Rate (g)

The next item on the list is the EPS growth rate. We will be using the 10-year EPS data of Coca-Cola (KO), to calculate its EPS growth rate.

Year	EPS	Year	EPS
2011	1.88 (cell C10)	2006	1.08
2010	2.53	2005	1.02
2009	1.47	2004	1.00
2008	1.25	2003	0.88
2007	1.28	2002	0.62 (cell C19)

Table 9.2 10 Year data of EPS of Coca-Cola (KO)

Source: EPS Data are here presented with courtesy from www.gurufocus.com website.²

From the above table, we can see that the EPS has grown from USD 0.62 (in 2002) to USD 1.88 (in 2011) over a period of 9 years. If you used a financial calculator, you will find the growth rate as 13.12%, which depends only on the first (USD 0.62) and last EPS values (USD 1.88). Any one-time effects (or effects of recession) in these numbers will adversely affect the calculations one-way or the other. So, we will employ a more complicated method by making use of all the EPS data to compute the growth rate. A little complication is well justified because we will be using computer power for the valuation calculations.

In order to calculate the growth rate, populate the 10-year EPS values in the column C; the EPS for the latest year (2011) in cell C10 and that of the 10th year (2002) in cell C19.

Cell D17: Enter '=SUM(C15:C19)/5'; you will see the value 0.92; average of 5 EPS values from 2002–2006, taken as the '*calculated EPS in 2004*' which will be used as the *beginning value* for the growth rate calculations.

Conservative Option: You can be more conservative (especially if the company did not meet a few of the 10-step evaluation criteria) by taking the higher of the two values as the beginning value i.e. the 'calculated EPS in 2004' and the 'actual EPS in 2004'.Cell D17: Enter '=MAX((SUM(C15:C19)/5),C17)'

Then we will compute seven growth rates viz., 7-year growth from 2004 to 2011, 6-year growth from 2004 to 2010, 5-year growth from 2004 to 2009, 4-year growth from 2004 to 2008, 3-year growth from 2004 to 2007, 2-year growth from 2004 to 2006 and 1-year growth from 2004 to 2005. The average of these seven multi-period growth rates will be taken as the *EPS growth rate (g)*.

Enter the numbers 7 through 1 in the cells from D10 to D16 as below:

Cell D10: Enter "7"; Cell D11: Enter "6"; Cell D12: Enter "5"; Cell D13: Enter "4"; Cell D14: Enter "3"; Cell D15: Enter "2"; Cell D16: Enter "1";

Now when you enter "=RATE(D10,0, -\$D\$17,C10)" in cell E10, you will be able to see the value, 10.75%. Then do a simple copy and paste operation; keep the cursor on E10 and copy; then paste on cells E11 through E16. You will be able to see the calculated growth rates as per the table below. The average growth rate can then be computed.

Year	EPS	Number of Years	Calculated Growth rates	Remarks
2011	1.88 (cell C10)	7 (cell D10)	10.75% (cell E10)	From 0.92 to 1.88 in 7 years
2010	2.53 (cell C11)	6 (cell D11)	18.36% (cell E11)	From 0.92 to 2.53 in 6 years
2009	1.47	5	9.83%	From 0.92 to 1.47 in 5 years
2008	1.25	4	7.96%	From 0.92 to 1.25 in 4 years
2007	1.28	3	11.64%	From 0.92 to 1.28 in 3 years
2006	1.08	2	8.35%	From 0.92 to 1.08 in 2 years
2005	1.02 (cell C16)	1 (cell D16)	10.87% (cell E16)	From 0.92 to 1.02 in 1 year
2004	1.00	0.92 (cell D17)		<i>Cell D17</i> - Average of 5 EPS values 2002–2006, taken as the <i>calculated</i> <i>EPS</i> in 2004
2003	0.88			
2002	0.62 (cell C19)			
	Growth rate (g)		11.11% (cell E20)	

Table 9.3 Calculation of Growth Rate

Cell E20: Enter "=SUM(E10:E16)/7": (10.75 + 18.36 + 9.83 + 7.96 + 11.64 + 8.35 + 10.87) divided by 7 = 11.11%. In the cell E20, you must see the value 11.11% (rounded-off to 2 digits), which is the average EPS growth rate.

7. Discount Rate

This is the last item required to complete the valuation of a stock. The discount rate is also known as the Required Return. This gives a measure of what investors require to compensate them for assuming the risks of investing in a stock. We all know all the investments compete with each other in the financial market. If the risk-free government bond offers 7% return, a common stock with no growth prospects offering 6% will have no buyers. In order to entice buyers, the common stock must offer far more than 7%. The capital asset pricing model (CAPM) allows us to estimate the required return of a stock using a formula:

Required Return (r) = Risk free rate + (Beta*Equity Risk Premium)

As we can see from the above formula, the required return is a function of riskfree rate, Beta and the Equity Risk Premium, details of which will be discussed in the following sections.

8. Risk Free Rate

Local currency government bonds have been traditionally considered as Risk Free Assets. For example, in the US, Treasury securities are considered 'riskfree' as these bonds are issued in US dollars and the US Government has been able to print the US dollars at will. So, the question of a US default on its liabilities does not arise. Only in the recent months the US Congress has curtailed the US government's ability to raise the debt limit which prompted S&P to downgrade the US credit rating from AAA to AA+. Interestingly, this downgrade did not affect the treasury bonds; instead the equity markets all over the world paid for it dearly. In fact, the prices of the US treasury bonds increased in spite of the ratings downgrade. This implies the confidence of investment community on US Government's ability to carry out its debt obligations. The S&P's historic downgrade took place on the 5th of August 2011. The 10-year Treasury bond yield on 5th August was 2.58%. In one months time, on 6th September the yield had dropped to 1.98%. The bond prices and yields move in opposite directions. The falling yields mean the increasing bond prices (and vice versa). How can the bond prices increase when the credit rating of the issuer has been downgraded? It only means the investment community as a whole still thinks that Uncle Sam is capable of fulfilling its debt obligations when due. So, for this reason we can take the US Treasury bond yield as 'Risk free rate' when we value US stocks. Similarly, if we are valuing an Indian stock the appropriate risk free rate must be the yield of Indian Government's Rupee (local currency) denominated bond. The US treasury issues T-bills that mature in one-year or less; treasury notes that mature between one to ten years; treasury bonds that mature between 10-30 years. So, the next question is yield of which treasury security should we consider as risk-free rate?

To answer this question, we need to take a detour to touch upon some of the risks involved in bond investing (more on this in the chapter on bonds). The risk in the term 'risk-free' means only the Credit Risk, which is also known as default risk. The credit risk refers to the ability of the issuer (in this case the US Government) to make the regular coupon payments and the principal payment on maturity. So, when we say 'risk-free' it means the creditor will not default. In addition to the 'credit risk' there are also many other risks involved in bond investments such as interest rate risk, liquidity risk, prepayment risk etc. These risks may be present in all bond investments including the ones classified as 'risk-free'. Thus 'risk free' is actually a misnomer as it only implies 'credit risk free'.

The interest rate risk affects almost all types of bonds, which is the subject of our discussion. We will explain this risk with the help of an illustration. Let us assume that you bought a Treasury bond that pays you 4% interest coupons. The prevailing market interest rate was also 4%. After you bought this bond, the market interest rate has fallen to 3%. In this case, your bond that pays 4% (while the market rate is 3%) is more valuable to investors; therefore the market price of your bond will increase. You will have a paper gain on your bond, which is a good thing to have.

On the other hand, let us assume that the market interest rate has risen to 5%. Now, your bond will become out of favor with its fixed 4% coupon payments while the market can offer higher interest of 5%. So, the market price of your bond will fall. Interest rate risk is therefore the decrease in bond prices due to increasing interest rates. If you had bought your bond with the intention of keeping it till maturity then the interest rate risk may not affect you. After all, you expect US Government to pay the regular coupons and the principal on maturity. The market value fluctuations during the interim (from the time of buying the bond till maturity) will have no impact on you since you have no intention of selling it anyway. However, if you must sell the bond before maturity, then you will lose money (capital loss) in an increasing interest rate environment.

A typical investor is more likely to hold a shorter term bond till maturity than a longer term bond. For example, if you bought a bond with a 3-year maturity, then most likely you will hold it to its full term. You don't expect your financial conditions to drastically change within a short period of 3 years. So, the perceived interest rate risk is very less in a 3-year bond. On the other hand, if you had bought a 30-year bond, you will most likely sell it at some point in time before maturity. So, the perceived interest rate risk is very high in a 30-year bond. Based on the above argument, 10-year bond will have some amount of interest rate risk. Not too less, as in the case of a 3-year bond, not too much, as in the case of 30year bond, somewhere in between. So, the yield of the 10-year Treasury bond is generally considered as the 'risk free rate' since the yield contains compensation for a reasonable amount of interest rate risk.

OK. We have settled on the 10-year Treasury bond yield. But the problem is that the yields keep changing all the time. On every trading day the 10-year Treasury bond prices and yields change. You can find the Daily Treasury Yield Curve Rates at the US Department of the Treasury <u>website http://www.treasury.gov/resource-center/data-chart-center/interest-rates/Pages/TextView.aspx?data=yield</u>. During the last 10 years, the yields of 10–year Treasury bonds have been in the range between 4% and 5.40%. However, since August 2011, the yield has started to fall (bond price on the rise) ending the year at 1.89%. The average of 1.89% (10 year low) and 5.4% (10 year high) therefore is (1.89 + 5.4)/2 = 3.65%. We can be a little bit more conservative by adding 10% safety factor to our calculation. Thus, we arrive at a round 4% as the risk free rate for valuing US stocks.

Cell C3: Enter "4%": risk-free rate for US stocks at this time.

The risk-free rate for the purposes of stock valuation is not going to change very much from quarter-to-quarter. But, keep checking the treasury website once in 3 months just to make sure the 4% is still relevant.

9. Beta

We know that the stock prices are always on the move; whether they are making rapid strides or gliding on the sideways the prices never stay fixed. As the prices

of the individual (component) stocks keep changing, the value of the overall stock index also changes continuously. Using the historical data of these price changes, a relationship has been established that describes the movement of a particular stock against that of the stock index. This relationship is called as Beta of a stock.

The beta of a US company is calculated based on the historical data of its returns against the S&P 500 index return. You may find the beta of most companies at several websites such as MSN Money, Google Finance, Reuters etc., For example, Coca-Cola has a beta of 0.51. It means that if S&P 500 index value changes by 1%, the Coca-Cola's stock price is expected to change by 0.51%. We will take another example: Citigroup (C) has a beta of 2.62. It means that if S&P 500 index value changes by 1%, Citigroup's stock price is expected to change by 2.62%. From the above you may observe that higher the beta, higher will be the volatility of stock prices.

Find the beta of the company you are interested in and enter the value in cell C5 of your spreadsheet. For Coca-Cola (KO) the value of Beta is 0.51.

Cell C5: Enter "0.51": Beta of Coca-Cola (KO)

10. Equity Market Risk Premium (ERP)

The equity market risk premium is the additional return expected from the stock market as a whole to compensate for investing over and above the risk-free rate. This additional return compensates investors for taking on risks associated with investing in the equity market as a whole. There are several methods to calculate ERP, but generally they are complex, requiring in depth understanding on finance and statistical methods. Furthermore, I don't intend to bother a retail investor with all these details. Based on experience, I know that a deluge of information can easily overwhelm most retail investors. As a result they may not even do the basic due diligence that is required prior to making investment decisions. Hence, I will try to keep this subject of valuation as simple as possible by using a set of fixed values for various markets as below.

US, UK, Australia, Germany, Singapore – 6% (most developed markets) India, China, - 10% (emerging markets)

Note: Once you become more proficient in doing valuation, you might want to increase or decrease the ERP of a market by a percentage point at a time to observe the changes in the intrinsic values. These values will then provide you with a possible price range with which you can carry out your investment operations.

With the above data, we can then calculate the discount rate for Coca-Cola stock by using the formula below.

Discount rate (r) = Risk free rate + (Beta*Equity Risk Premium) = 4.0 + (0.51*6)

$$= 4.0 + 3.06$$

= 7.06 %

In your spreadsheet, enter the following: Cell C4: Enter "6%" Cell D25: Enter "=C3+ C4 * C5", you will see 7.06%

11. Valuation Calculations

Having calculated the values for growth (g) and discount rate (r), we can calculate the intrinsic value of the stock by substituting these in the formula below.

Intrinsic Value = $E * (1+g)/(1+r) + E * (1+g)^2/(1+r)^2 + \dots + E * (1+g)^{\infty}/(1+r)^{\infty}$

The above formula implies that the present value is a sum of all the discounted future earnings or cash flows to perpetuity (infinity). But let us be more conservative by considering only the next 12 years of future cash flows. Moreover, instead of aiming to arrive at a single number for the intrinsic value, it would be more appropriate to get a *range* of values *to provide a ballpark figure for the valuation*. So we will perform two sets of calculations viz one by using EPS values and another one using operating cash flow per share and obtain a range.

Rewriting the above formula, with the following values

 $E = $1.88 (EPS) \text{ or } $2.09 (operating cash flow per share)}$ g = 11.11% (Section - 7) r = 7.06 % (Section - 11)

Intrinsic Value 1 = 1.88 * (1.1111)/ (1.0706) + 1.88 * (1.1111)² / (1.0706)² +... + 1.88 * (1.1111)¹² / (1.0706)¹²

Intrinsic Value 2 = 2.09 * (1.1111)/ (1.0706) + 2.09 * $(1.1111)^2/(1.0706)^2$ +... + 2.09 * $(1.1111)^{12}/(1.0706)^{12}$

We will start entering the values and formulae in the valuation template as below.

- (i) Cell C23: Enter "=C10": you must see the value as \$1.88.
- (ii) Enter the numbers 1 through 12 in the cells from D28 to D39.
- (iii) Cell C28: Enter "=\$C\$23*(1+\$E\$20)^D28/(1+\$D\$25)^D28": you must see the value as \$1.95
- (iv) Place the cursor on cell C28, copy and paste on cells C29 through C39.
- (v) Cell C40: Enter "=SUM(C28:C39)": you will see the value as \$28.95
- (vi) Cell E28: Enter "=\$E\$23*(1+\$E\$20)^D28/(1+\$D\$25)^D28": you must see the value as \$2.16
- (vii) Place the cursor on cell E28, copy and paste on cells E29 through E39.
- (viii) Cell E40: Enter "=SUM(E28:E39)": you will see the value as \$32.12
 - (ix) Cell D41: Enter "=(C40+E40)/2" you will see the value as \$30.54

Year	Discounted EPS	No of Years	Discounted Operating cash flows
2012	\$1.95 (cell C28)	1 (cell D28)	\$2.16 (cell E28)
2013	\$2.02	2	\$2.25
2014	\$2.10	3	\$2.33
2015	\$2.18	4	\$2.42
2016	\$2.26	5	\$2.51
2017	\$2.35	6	\$2.61
2018	\$2.44	7	\$2.70
2019	\$2.53	8	\$2.81
2020	\$2.63	9	\$2.91
2021	\$2.72	10	\$3.02
2022	\$2.83	11	\$3.14
2023	\$2.93 (cell C39)	12 (cell D39)	\$3.26 (cell E39)
Range	\$28.95 (cell C40)		\$32.12 (cell E40)
Average		\$30.54 (cell D41)	

Table 9.4 Calculation of the Range of Intrinsic Value.

The sum of the discounted EPS is \$28.95 and the sum of discounted operating cash flow is \$32.12, which is the range of intrinsic value of Coca-Cola (KO) and the average of these values is \$30.54. *If you have seen the average value as 30.54 in cell D41 and if you have saved the spreadsheet, then you have successfully constructed your own valuation template.* You can use this template for valuing common stock of any US listed company in your wait-list.

You may ask a question, 'what if the two calculated values become too far away from each other? To which one of the two values, the *true* intrinsic value must be closer to?' The answer is, 'we will *err* towards the value calculated from the operating cash flow, in this case \$32.12 (cell E40) because the operating cash flow measures more accurately the ability of the business to generate cash from operating activities. Having said, your purchase price should not be too far away from the average of the two numbers, in this case \$30.54.'

Now that you have your own template, it is easy to construct additional templates for stocks of companies in other countries. You only have to change the risk-free rate and Equity risk premium for the country you are interested in.

12. Valuation in Practice

As I had mentioned earlier, my goal is to provide a system to do stock valuation within a flat 15 minutes. The valuation procedure using the template is listed below for convenience.

Step-1: Open the file "US stock valuation template" and rename it. When I rename the file, I normally include the company ticker name, month and year of

the valuation in the name of the file itself. e.g. Valuation file for Microsoft (MSFT) in Jan 2012, would be named as "Value-US MSFT JAN2012".

Time taken: Less than a minute.

You will find that the template contains highlighted cells C5, C6, C7 and C10 to C19, indicating that these are only required data on a company to do valuation. There are actually 13 such cells in all. They are (1) Beta, (2) Operating cash flow (in millions), (3) total number of shares (in millions) and (4–13) Earnings per share (EPS) for the last ten years.

<u>Step-2</u>: For each data, visit the corresponding website as indicated in the Table 9.1. Get the data and fill-in the highlighted cells in the spreadsheet.

Time taken: around 10–12 minutes initially; after that, it should take only about 5–6 minutes.

<u>Step-3</u>: Read the range of Intrinsic Value & the average of the Stock from the spreadsheet.

Time Taken: Less than 5 seconds.

As if by magic, the valuation is completed well within our target of 15 minutes. Before proceeding further, you must do the valuation exercise for all the companies in your Wait-list.

13. Quality of Our Valuation

Don't be overly satisfied with the quality of our valuation. We had taken the EPS and the operating cash flow per share data from reputed websites, which can be relied upon. However, our calculation method has many subjective decisions (impurities) in them as listed below. Because of this reason, the values cannot be relied upon entirely.

- 1. Risk-Free-Rate (RFR). If we had taken a lower RFR, we will end up at a lower discount rate, which can increase the intrinsic value. By using 4%, we are being extra conservative in our valuation.
- 2. We had simply taken a fixed value for Equity Risk Premium as 6% instead of actually finding out the value using statistical methods or get this information from a reliable statistical data provider. This is a pure estimation and we cannot be certain if it will make the valuation conservative or lenient.
- 3. We had also used only 12 years of discounted cash flows to arrive at the intrinsic value of the company instead of considering the cash flows to perpetuity. In this case also, we are being extra conservative in our valuation.

Each one of the above is based on subjective judgments that can affect the accuracy of the results. Hence, if two research analysts make a call on a particular stock their valuations would almost always be different. Stating in the words of Warren Buffett in Bershire's 2010 annual report¹, 'The challenge, of course, is the calculation of intrinsic value. Present that task to Charlie and me separately, and you will get two different answers. Precision just isn't possible.' It is coming from

a person like Warren Buffett you better believed it. Do not expect accuracy here. So long as you get a ballpark figure (a range) and you operate within that range consistently you should do pretty good.

Furthermore, using a 10-year data for calculating EPS growth rate assumes that the business model is more or less stable during the entire period. This method cannot be used to value companies whose recent business model and operational results are far different from conditions that existed 10 years ago. For example, in 2001 Apple Computers Inc (AAPL) was a struggling computer maker with less than 3% market share in Personal Computers. But now in 2011, Apple has grown into a consumer electronics giant boasting several super-hit products in addition to increasing market share in the PC market space. In fact, at the time of writing this book it is the second largest company in market capitalization in the United States. In such cases, the method discussed in this chapter may not work; we need to look other valuation measures such as P/E ratio, P/BV ratio etc., Moreover, investing in growth stocks may warrant a different set of due diligence analysis.

Here, I am limiting my discussion from the point of view of the working class retail investors. If you happened to be professional investor with necessary time, skills and inclination to perform a lot more work than the 10 steps outlined here, you may dig deeper to uncover other good reasons that might make an investment worthwhile in spite of having to pay high price for the shares.

From time to time, you will come across several companies experiencing super fast growth in their sales and earnings. Quarter after quarter, their results beat analyst's expectations. In almost all such cases, the stock prices of those companies could be found only near the stratosphere! But, how can we be sure that the company can indeed grow forever? If the company can't keep up with its growth expectations, then it can't command steep premiums and the share price can collapse rapidly. If you are an engineer working in a factory or a salesman on the road, you will not have the time or the convenience to monitor the prices during market hours. By the time you know what had happened, you could be facing huge losses.

Investment strategy that mainly focuses on growth prospects of companies is known as growth investing, which runs contrary to the concept of value investing. Growth investors are not afraid of paying high prices for the shares if the expected growth in earnings and revenue can justify such high prices. Moreover, these investors must possess superior skills and quality time to analyze growth companies, which is not something that can be done easily with part-time effort. Since this book is written for working class retail investors, who have constraints on time, investing in growth stocks has not been covered in this book. If you want to learn more on growth stock investing, let your first book be "Common Stocks and Uncommon Profits"³ by Phillip Fisher.

14. Verification

I am still not satisfied with our valuation because of the possible inaccuracies of the parameters that went into the calculations. Recall our discussions on the risk-free-rate and equity risk premium. Any wrong assumptions used in the calculations will affect the results in a huge way and hence the term 'garbage in; garbage out' will be very apt in this case. So, it would be a good idea to verify the valuation results against analyst reports you receive from your brokers and/ or the publicly available trading data of the famous investment gurus, which you can find at www.gurufocus.com website. From the data accessed (on 20th Nov 2012) from www.gurufocus.com website, under 'Warren Buffett Latest Trades⁴, Berkshire had purchased (estimated 30th Sep 2012) IBM shares in a price range between USD 183.09 and USD 207.31, the average price being USD 196.84 and DaVita, Inc. DVA shares in a price range between USD 94.80 and USD 103.61, the average price being USD 98.19.

So, it would be a good idea to compare the calculated intrinsic values against the average purchase prices of IBM & DVA common stocks. Let us get the required data on IBM and populate the spreadsheet as per the table below:

Sr No	Data Item	Value
1	Beta (cell C4)	0.68
2	Operating Cash flow (cell C6)	19,846 millions
3	Total Number of Shares Outstanding (cell C7)	1179 millions
4	EPS – 2011 (cell C10)	13.25
5	EPS – 2010 (cell C11)	11.69
6	EPS – 2009 (cell C12)	10.12
7	EPS – 2008 (cell C13)	9.07
8	EPS – 2007 (cell C14)	7.32
9	EPS – 2006 (cell C15)	6.2
10	EPS – 2005 (cell C16)	4.96
11	EPS – 2004 (cell C17)	5.03
12	EPS – 2003 (cell C18)	4.41
13	EPS – 2002 (cell C19)	2.10

Table 9.5 Required data for calculation of Intrinsic Value of IBM

Source: Cash flow, Number of shares, EPS Data are here presented with courtesy from www.gurufocus.com website. 5

When you have finished entering the above data in the spreadsheet, the range of intrinsic value of IBM is calculated as \$262.31 and \$333.25 and the average is \$297.78. At the time of writing this chapter IBM's share price (around \$190 in Nov 2012) appears to be grossly undervalued.

We will now repeat the process for DVA and populate the spreadsheet as per Table 9.6.

Sr No	Data Item	Value
1	Beta (cell C4)	0.48
2	Operating Cash flow (cell C6)	1,180 millions
3	Total Number of Shares Outstanding (cell C7)	93.5 millions
4	EPS – 2011 (cell C10)	\$5.05
5	EPS – 2010 (cell C11)	\$4.00
6	EPS – 2009 (cell C12)	\$4.08
7	EPS – 2008 (cell C13)	\$3.56
8	EPS – 2007 (cell C14)	\$3.61
9	EPS – 2006 (cell C15)	\$2.80
10	EPS – 2005 (cell C16)	\$2.27
11	EPS – 2004 (cell C17)	\$2.25
12	EPS – 2003 (cell C18)	\$1.86
13	EPS – 2002 (cell C19)	\$1.46

 Table 9.6
 Required data for calculation of Intrinsic Value of DVA

Source: Cash flow, Number of shares, EPS Data are here presented with courtesy from www.gurufocus.com website. 6

Again, after you have entered the data for DVA in the spreadsheet, you find the range of intrinsic value as USD 89.86 (based on EPS) and USD 224.58 (based on operating cash flow); the average being USD 157.22. Berkshire's average purchase price of USD 98.19 is closer to the lower band of the intrinsic value range and far lower than the average value.

Remember, Warren is known to purchase good stocks at steep discounts to the fair value when the market pessimism is at the highest. Doing the valuation gives confidence and courage to buy stock at lower prices. If you performed the valuation yourself and arrived at a range of \$90 and \$120, and if the market offers you \$80 you would confidently think it is bargain sale. You won't be freaked out of the market by the screaming media and the 'sell' calls by research analysts. This is the greatest benefit of doing your own analysis and valuation.

However, I would like to emphasize here that the verification is being done neither to portray nor to suggest that the Berkshire's method of stock valuation may be too simplistic. I am positive that Berkshire's calculated value will be much closer to the 'actual' value by using much-sophisticated tools and techniques. And I am not going to fool myself to believe that our formula can match the valuation of the world's most respected investor.

Let us imagine that the stock investors are like 10,000-meter marathon runners competing in what appears to be an eternal race. Warren wins the race hands-down most of the time. But there are so many millions of people who drop out, as they could not complete it. I merely want my readers and myself to finish the race still running. And I believe that the valuation technique will help us all to achieve that purpose. But if you want to finish it right at the top (as in any other calling), you will need to do far more than this 15-minute valuation. Ben Graham, the father of Value Investing has said that achieving satisfactory results is easier while achieving superior results is harder than it appears to most people.

As I have written this book for the retail investors who spend less time on investing and possess little (or no) skills on the subject, I catered to both the needs in this book. Precisely because of those two reasons a retail investor cannot hope to achieve *superior* results. My objective through this book is to empower a retail investor to achieve *satisfactory* results on a consistent basis. The 15-minute valuation method does just that, by providing a ballpark range (of a stock's value) in a very short time.

These days, you will find many people talking about Warren Buffett's spectacular performance as an investor and many retail investors naively believe that they can also easily copy his techniques to achieve similar results. While I strongly encourage and hope for the very best, I must at least offer a few reasons why *achieving superior results is harder than it appears* for the working people.

- 1. Warren Buffett is full-time businessperson; works as the CEO in Berkshire. This is in stark contrast to retail investors who hardly get a couple of quality hours in a week for making investment decisions.
- 2. People working in business organizations get to 'master mind' with other similar minds, working towards the common goal, within the organization. The ability to master-mind is of priceless value. If you are a retail investor making your investment decisions alone (burning your mid-night oil), you will certainly lack this advantage. Your best hope is to join an investment club or begin one with like-minded individuals.
- 3. Berkshire is an investment holding company having many subsidiaries that operate insurance businesses. The innate nature of insurance business is that clients pay premiums upfront to hedge against future risks. The premiums collected thus can act as interest-free capital for investing, very similar to debt. We know that using debt results in leverage. Thus, Warren had managed to employ interest-free leverage to amplify his superior investment skills. For a retail investor, it is impossible to get such interest-free leverage.
- 4. And lastly, Warren is genuinely in the business of making money for his shareholders. In the words of Charles F Haanel, author of the famous book 'The Master Key System'⁷, "the law of success is service; that we get what we give... ". His focused endeavor to make his shareholders wealthy must be the primary cause that made him phenomenally wealthy also in the process.

15. Price to Earnings Ratio (P/E ratio)

No discussion on stock valuation will be complete without touching on the subject of P/E ratios. P/E ratio is one of the most commonly used financial jargons by the retail investors.

The Price / Earnings ratio is calculated by dividing the current share price by the earnings per share (EPS).

P/E Ratio = Current Market Price/Earnings Per Share (EPS)

P/E ratio is very popular because most people can easily understand it. If the EPS of a company is \$1 and if the stock is trading at \$10, then the P/E ratio is 10. (\$10 divided by \$1). It is really that simple. Moreover, P/E ratio can be calculated from readily available data. Stock prices are available in all leading financial newspapers, and websites. EPS value of a company can be found in company's quarterly reports, financial newspapers and websites. The ratio calculated thus is called as 'Trailing P/E ratio'.

If the Current Market Price is divided by the 'Expected next year's EPS' then it is called 'Forward P/E ratio'. The stock valuation is a forward-looking process; therefore stock analysts usually tend to forecast the next year's EPS and then calculate the forward P/E ratio. However, a working class retail investor, for whom this book has been written, may not have the tools and time necessary to calculate the forward EPS and therefore the 'Forward P/E ratio'.

Sometimes you would find companies in the same industry have different P/E ratios. As a rule of thumb, the companies having low P/E ratios most likely will have more debt. The stock price tends to be lower for companies with high debt due to the risk of default. For this reason, lower P/E ratio does not mean it is a good buy. If you had followed the 10-step evaluation procedure before putting a company into your wait-list, you would have already disqualified companies with high debt. My ex-colleagues and myself have made investment decisions to buy stocks merely because the P/E ratios were less than 10. The idea at that time was that, if a company's P/E ratio is less, then it must be on a bargain sale. I am sure there are still many people out there who make investment decisions solely based on the P/E ratios.

In general, for companies in mature markets, P/E ratio of less than 15 times is considered reasonable. But, in panic situations, it is not uncommon to find great companies selling for less than 10 times the current earnings. During the normal economic conditions, you may never come across such great buying opportunities. But, P/E ratios should not be used independently; it can only be used to compliment your 10-step evaluation and intrinsic value calculations.

16. Price to Book Value Ratio (P/BV Ratio)

Investing in stocks that are selling for less than the book value was the specialty of Ben Graham, father of Value Investing. P/BV ratio is calculated by dividing the stock price (P) by the Book Value Per Share (BVPS) of the company.

P/BV Ratio = Current Stock Price/Book Value per share

Book value (BV) of the company is the shareholder's equity, which is arrived by subtracting the total liabilities from the total assets. By dividing the book value (BV) by the total number of shares you can get the book value per share (BVPS). The P/BV ratio is a very important metric used to evaluate the attractiveness of the common stock at the current market price with reference to the book value (accounting value carried in the balance sheet) of the company. P/BV ratio can be used even when P/E ratio is negative. (i.e. negative earnings)

I suggest that you make one adjustment to the book value before using it in the calculation, which is to remove the 'goodwill' from the equity. You will find 'goodwill' listed under 'non-current assets' of the balance sheet. What is goodwill and why it must be removed? Assume that Company-A acquired Company-B for \$10 million when the equity (book) value of Company-B was only \$8 million. At that time, company-A will assess the *fair value* of company-B and let us say it was \$9 million.

The amount of \$1 million (difference between the sales price and the fair value) is the premium paid by Company-A to woo the shareholders of Company-B to sell their shares. The justification for paying more is usually because of the synergies that may be realized after the acquisition is completed. After the acquisition, the accounts of company-B will be merged into that of company-A. The premium paid in excess of the book value will be listed as 'goodwill' in the accounts of Company-A.

As we are only interested in the book value of the company, the premium paid should not be considered in the calculation. This is the reason why the 'goodwill' must be removed. I wonder the logic of putting the goodwill under assets in the financial statements. It would be beneficial for the users of the financial statements, if goodwill is removed from the 'assets' section and then listed as a separate line item after 'equities' section. The balance sheet is supposed to represent the financial status of a company as a snapshot on a given date. How can overpayment be considered as assets *now*? It may become assets later when the expected synergies of the acquisition are materialized, but to realize them immediately is taking it too far too soon. At best goodwill can be called as 'potential assets', not assets. This is one of the items in my wish list for the future.

From time to time, you will find many companies selling at steep discounts to their book values, sometimes 50 cents to the dollar. More than likely in these situations, there would also be some fundamental problems with the companies that warrant such huge discounts to the book values. As working class retail investors, you may not have the necessary skills and time to evaluate the risks involved in such risky investments properly. Remember, if the company did not pass most of the 10-step evaluation procedure, then it really doesn't matter if it sells very cheap.

So, P/BV ratio also cannot be used independently; it can only be used to compliment your intrinsic value calculation. If you followed the 10-step evaluation procedure before putting companies into your wait-list, finding some of them selling for less than their book values (P/BV less than 1) will be very rare. Moreover, with the widespread use of computers for investing and with the advent of stock screening software solutions, it is now very hard to find good quality companies selling for less than its book value. You may hope to find them only in panic situations.

To Summarize...

- 1. There are no known methods of valuation for many items such as TVs, Cars etc., which we purchase in our lives. On the other hand, there are several known methods for valuation of stocks. So, it is ironic that we tend to fair well purchasing stuff like TVs and cars; but do pretty bad buying stocks. Obviously, the problem is not due to the lack of good techniques, it is perhaps due to our laziness to use them consistently.
- 2. By now, you must have created your own valuation template for calculating the intrinsic value of stocks. Even if you are not considering Coca-Cola for your wait-list, using the values of Coca-Cola will at least verify the accuracy of your template.
- 3. This valuation method can be reliably used *only* for companies that had passed most of the 10-step analysis.
- 4. To calculate the intrinsic value of the company using this template, you are required to feed only 13 data; beta, operating cash flow, number of shares outstanding and EPS data for the latest 10 years. The goal is to enable the retail investors to do valuation with a reasonable accuracy within a flat 15 minutes.
- 5. As per the "time value of money" (TVM) concept, cash flow received in future is worth less than cash flow at the present time and vice versa.
- 6. The value of a stock is calculated as the sum of all the present values of its future cash flows. In our template, we consider cash flows for the next 12 years only, to be more conservative.
- 7. The P/E and P/BV ratios must not be used in isolation, but can be used in conjunction with the intrinsic value calculation.
- 8. Before proceeding further, carry out the valuation of all the stocks in your wait-list. You don't have to be obsessive with the accuracy of valuation, because there is no such thing as accuracy. A ballpark range should be sufficient.
- 9. Then the only thing you will need to do is to wait for the right opportunity to buy. So far, we have only made the shopping list. But 'sale' is not there yet. You must tell yourself that you will not buy the

stocks at regular prices; you will only buy them at 'bargain sale'. The sale could be just around the corner; or it could show up a couple of years later; no one knows when. But when the sale arrives ultimately, you must be in a position to recognize it and take action boldly. This is the real purpose of doing your own valuation.

10. Margin of Safety

(Doesn't Cost a Cent More!)

We believe this margin-of-safety principle, so strongly emphasized by Ben Graham, to be the cornerstone of investment success.

Warren E Buffett

Chairman's letter, Berkshire Hathaway Annual Report 1992¹

1. Art and Science of Investing

The term "Margin of safety" has its origin from civil engineering design and refers to the "factor of safety" used to calculate design load. The designers typically take the highest load to be encountered by a structure and multiply it by a 'factor of safety' to arrive at the design load in order to minimize the probability of failure. The inclusion of the factor of safety in design is supposed to compensate for estimation errors and other events beyond our control such as natural disasters. Ben Graham, also known as the father of value investing, originally introduced the concept of safety into stock investing.

In engineered systems, adding factors of safety always increases the cost of construction. You must use thicker and stronger materials to cater to the increased design load. However, inclusion of a margin of safety in an investment always reduces the money paid. The incorporation of margin of safety in both the engineered systems and investments is intended to provide peace of mind, but the difference is in the cost. It is therefore ironic that we are always ready to incorporate safety in our buildings even if we have to pay more, but we will not think of safety in our investments even if there is money to be gained from it. So the system that gives peace of mind while leaving some change in our pockets must be a true Win-Win situation and therefore demands further scrutiny.

As retail investors we are never sure of the future prospects (revenue, earnings etc.,) of the companies. And frequently, we find professionals and company insiders just as clueless, going by the number of earnings revisions and surprises. If forecasting future revenue and earnings (of companies) is difficult for the professionals, how can we be sure of our ability to forecast them correctly? According to Ben Graham, the basic function of the margin of safety principle is to eliminate the necessity of accurate estimation of the future. It is therefore much better if we quit the business of forecasting completely relying only on the past data and apply a large enough margin to provide a sense of safety and comfort.

It is commonly believed that investing is an art, not a science. There is certainly an element of truth in that belief. An investor is expected to do analysis on the business, financials, management competence, industry positioning, macroeconomic activity etc., before arriving at an opinion on the future prospects of the company. Performing these functions involve *forecasting* based on the current trends of several economic, industry wide and company-specific variables. One thing we know for sure is that scientific theories must be subject to rigorous testing and capable of proof. But, any process that involves forecasting cannot fulfill this requirement. So, it seems logical to accept that investing is more of an art than science.

If we use only the historical data and apply a margin for safety, then the scope for forecasting can be vastly reduced. In essence therefore, the concept of 'margin of safety' is one giant step towards making investing a science, rules based body of knowledge that can be subjected to testing. It is not my intention to argue for or against whether investing is an art or science. That can be a subject of discussion for another time. But, my idea is to simply point out the possibility of making investing a science. This possibility exists for all of us. The biggest advantage of this line of thinking (investing a science) is that we will not enter into it without learning the rules of the game!

2. Initial Rate of Return

The initial rate of return is the ratio of the earnings from an asset to the cost of the asset. Recall our discussions on the "P/E ratio" in the previous chapter. Initial rate of return is the inverse of "P/E ratio". While the initial rate of return is in percentage, the P/E ratio is a number.



Fig 11.1 Initial rate of return and P/E ratio

If the P/E ratio of a company were 12 (say, stock price of \$12 divided by EPS of \$1), then the initial rate of return would be 8.33% (\$1 divided by \$12). For a given EPS, lower the share price, higher will be the initial rate of return.

Having calculated the initial rate of return, the next task is to find a margin of safety. We know the 10-year risk-free bond yields around 4% (Chapter 10). Remember, bonds have no potential for growth. So, the stockholders have 4.33% (8.33-4%) excess returns than the bondholders in addition to growth prospects of the company. A part of the annual earnings will get distributed as the dividends and the balance will become part of the shareholder's equity. Assuming a 2% dividend yield, the balance 2.33% excess returns get accrued to the shareholders. Over a period of 10 years the excess returns will be 23.30% (2.33%*10), which may act as a cushion to prevent or minimize a loss due to unfavorable conditions.

What happens when you buy a company at a P/E ratio of 20? The initial rate of return will then be only 5% (1/20). The return from this stock investment

pales in comparison with the risk-free bond yield of 4%, when you consider the risks of investing in the stock market. So, the margin of safety is a function of the price paid. If the price paid is low the margin of safety will be high and vice versa. At a very high price, margin of safety will cease to exist.

The concepts of margin of safety and the initial rate of return cannot be used on all companies indiscriminately. Many companies, in particular the IPOs, may not have stood the test of time. Based only on a few years of stellar performances some of these companies may appear to be great investments with adequate margins for safety. But, in the absence of a long history of earnings power during good times and bad, we cannot truly appreciate the risks of investing in such young companies. So, these concepts can only be applied on companies that have passed the 10-step evaluation process.

Having said, big risk is not in paying a high price for a good quality company, but paying a high price for low quality company during good times. Therefore, high importance must be placed on the 10-step evaluation process in order to ensure the quality of the company.

3. Dividends

As a long-term investor, you must be looking for some regular returns from your investment. Dividends are the only form of returns from stock investments if you are holding them for a long-term. Dividends are like 'a bird in hand ...', which obviously reduce your risk of holding stocks. Regular dividend payments also force the management to have some discipline; as a counter-balance to reckless behavior. For retail investors holding their investments for long-term, companies that pay regular dividends are much safer than companies that don't have a dividend policy.

Let us dig a bit deeper into Coca-Cola's earnings per share (EPS) of 1.88^2 in 2011. A part of it gets paid out as cash dividends. A quick check on Coca-Cola's data at GuruFocus website reveals that the Payout Ratio is $50\%^2$.

a. Dividend Payout Ratio

The dividend payout ratio is the percentage of the EPS paid out to the shareholders as dividend.

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Dividend Payout Ratio (%) = Dividend payout/Earnings per share (EPS)
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This means Coca-Cola pays 50% of its EPS to its shareholders as dividends. You would receive 0.94 (=1.880.50) per share and the balance amount 0.94 (=1.88 - 0.94) per share will be added to the equity capital of the company as *retained earnings*.

b. Dividend Yield (Dividend/Price)

The dividend yield is calculated by dividing the dividend payout by the share price.

Dividend Yield (%) = Dividend payout/Share Price

If you have bought Coca-Cola's shares at \$38, then the dividend yield is 2.47%. (0.94 divided by 38). If you have paid less for your shares then the dividend yield will be higher and vice versa.

Now, let us assume a growth rate of 5%. It means as a shareholder you are entitled to receive \$0.99 (\$1.85*0.51*1.05) next year, \$1.04 (\$0.99*1.05) the following year etc., to perpetuity. We can think of the dividends as a bond that pays ever-increasing interest coupons to perpetuity.

The *retained earnings* (reinvested past earnings) will be put to use by the company to earn a return equivalent to Return On equity (ROE) in the next year. ROE is the returns generated by the company from its equity capital. From GuruFocus website, we can find the Return On Equity (ROE) of Coca-Cola in 2011 as $26.90\%^2$. This implies that in the following year, the company will earn \$0.25 (=\$0.94*0.269) per share from this additional equity capital, if it could maintain the same ROE. Thus the money retained by the company *may* be used for the growth of the company.

Some companies have a declared dividend payout policy and follow it consistently. Some companies seldom payout a dividend. There is no right or wrong when companies do not pay a dividend. The superior ability to produce additional earnings (growth) in the future periods is the *only* justification for the company to retain part or whole of its earnings. Sometimes, companies destroy value by unscrupulously investing the retained earnings in fanciful projects and ideas. So, keep looking at the consistency of ROEs to get the clue as to how the management may be using its capital.

Warren Buffett's Berkshire Hathaway Inc had never paid out a dividend, but made its shareholders enormously wealthy by reinvesting all the earnings at consistently high ROEs. As emphasized earlier, the justification for retaining a part or the whole of the earnings is the company's superior ability to demonstrate growth. Berkshire has managed to do a very impressive job of reinvesting the earnings at a very high ROE of close to 20% year after year for over the past four decades.

Of course, the company may use the retained earnings to buy back its own shares, which is another great idea. ROE will still reflect this, as any reduction in the shares will reduce equity, which should in turn boost the ROE. When there are one-off gains, some companies pay special dividends; instead the shareholders are better off if the company bought back its own shares. As discussed in an earlier chapter, the effects of share buy-back will be lasting.

4. Buying Stocks During Market Crashes

If you watch the prices of a particular stock or a stock index on a chart you will notice that the prices are always on the move; sometimes upwards, sometimes downwards, most of the time sideways, but seldom remain static. You will also notice that the upward movements are usually slow and measured whereas the downward movements are swift and drastic. These unusually large downward movements are mostly caused by macro level events. Listed below are a number of events that have affected the asset prices negatively in the recent times.

- a. Global financial crisis, 2008-2009
- b. Greece debt crisis, 2010
- c. Tsunami in Japan, March 2011
- d. Downgrading of US sovereign debt by S&P, August 2011
- e. Euro region debt crisis causing several mini market fluctuations, 2011

In the past, such events used to be very rare and far between; but of late, especially after the recent global financial crisis, the global level events appear to be recurring more often. The cross border investing, close integration of world economies, better and faster communication within the investing community, the presence of televisions in the trading rooms, high frequency trading etc., are common reasons cited for this global phenomena. Furthermore, the supply disruptions due to major natural disasters (e.g. earthquake and tsunami in Japan) and wars or even small unrests particularly in the oil producing countries in the Middle East or West Africa also contribute to volatility of asset prices.

When the market reacts to such global events, indiscriminate selling ensues resulting in huge declines in most stock prices. In these times, the stocks of both good and bad companies get punished. This is when many windows of opportunities are presented to a patient investor looking to buy some great stocks at ridiculously low prices. There is a famous saying, 'the time to buy is when there's blood in the streets.' You may either of the two things when such an opportunity is presented.

- a. Buy a company's stock at low price levels (OR)
- b. If you had already bought a company's stock earlier (at higher price), you can buy more at the current lower price to bring the *average buying price* lower.

You cannot blindly apply the above method for *any* company whose prices have declined during a crisis. Only the companies that have passed through the 10-step evaluation process qualify.

5. Dollar Cost Averaging

Dollar Cost averaging is a method by which, an investor would buy stock for the same dollar amount at periodic intervals at prevailing stock prices. When the prices are high, the fixed dollar amount could buy less number of shares; when the prices are low, the same dollar amount would purchase more number of shares. Thus a reasonable average price could be achieved without paying too much attention to the market gyrations. Such an approach allows a retail investor to spend his precious time on stock selection without having to bother about the market timing and associated emotional issues. Let us say, you have allocated \$10,000 for buying a particular stock when it was trading at about \$70 a piece. Instead of buying all the shares in one go, you could have a fixed program to buy the shares for \$2500 per quarter, in 4 consecutive quarters. Such a strategy will not work when the market is in an uptrend all the way. For example, if the price of the share was \$70 in the 1st quarter, \$73 in the 2nd quarter, \$76 in the 3rd quarter and \$80 in the 4th quarter. You would be better off had you bought shares for all the \$10,000 at \$70 a share.

However, what if the market crashed right after your purchase at \$70 a share for the entire capital of \$10,000? You could lose quite a bit and you wouldn't possess any more ammunition left to take advantage of the low prices. It is at this time, average investors will succumb to negative emotion of fear and may act irrationally. So, in a down trending market or when the market is in sideways the dollar cost averaging will work to reduce the losses by lowering the average purchase price. The advantages of using this strategy have been summarized below:

- a. Implementing this strategy does not require any time or skills to monitor the market to purchase the shares.
- b. It reduces big initial losses as buying at different prices can average down the purchase price.
- c. This strategy lets you run your operations free of emotions, since the decisions are made based on rules. This to me is one of the greatest advantages of this strategy.

6. Diversification

Diversification is probably the most easily understood concept in investing and I certainly need not explain it in any great detail. Investing public in general, are aware of the importance of a diversified portfolio. We have all heard 'don't put all the eggs in one basket' too often in our lives. After the spectacular collapses of companies like Enron, Global Crossing, Worldcom, Lehman Brothers etc., keeping a large exposure to a single company can be fatal to our financial stability.

If you had followed the 10-step analysis for selecting prospective companies for investment, then you can take for granted that the respective managements are able to create excess value for the shareholders. The questions of management efficiency and ability have been adequately answered through the analysis of the financial statements. But what if the management cooked up the books? While I strongly recommend you attend AGMs whenever possible, taking a few glimpses of the directors or even talking to them at the AGMs will not reveal whether they are cooking the books or not. Unfortunately there is no litmus test to find out the corporate cheating earlier than the general public. By the time retail investors come to know of the truth, the share price would have already plummeted. Diversification is the only sensible thing to do to mitigate such risks. While we must respect the importance of diversification, there are also certain myths about it that I would like to throw some light on. Firstly, diversification is neither a holy grail in investing nor a general panacea for our shortcomings. Dividing your 'investments eggs' into many baskets does not mean anything until you are sure that your *baskets* in fact are *strong*. Putting all the eggs in a few strong baskets is very much better than spreading them into many weak baskets. As an investor it is our duty to ensure that the baskets we put our 'investment eggs' into are strong. Some of the richest people in the world have made all their wealth by putting all their eggs in a single basket. Bill Gates, the richest man in the world became rich because of his shareholding in a single company, Microsoft. Similarly Warren Buffett's entire holding is tied to Berkshire Hathaway. So, putting the eggs in a single basket is not really a problem *per se* because these individuals, as controlling shareholders, knew how strong their 'single' basket is. The real issue here is how well you know that your investments are sound.

It does not matter if you have 100 stocks in your portfolio. If majority of them are poor grade investments, your overall portfolio will not fare very well. On the contrary even if you have five topnotch stocks purchased at reasonable prices, your portfolio will be in a pretty good shape. It will be interesting to note that the US sub prime crisis of 2008 did not happen due to lack of diversification, but because of *well diversified* mortgage loans of *poor quality*. As in many aspects of life, quality is always more desirable than quantity. Only after you have achieved quality, it is worthwhile to add quantity.

Having too many companies in the portfolio will obviously increase transaction costs putting downward pressure on the overall investment return. There is also a quantitative analysis work³ that recommends 30-40 stocks in a portfolio in order to reap the full diversification benefits. You will need to balance the benefits of diversification with your ability, availability of quality time for doing research and the transaction costs. The key however is the quality of your research.

US Sub Prime Crisis

It all started when banks became liberal in granting mortgage loans to individuals with poor credit histories during the property boom years from 2004 to 2006 in the US. The banks probably got lax due to the ultra low interest rate environment and ever increasing property prices. In many cases the banks did not even insist on down payments. To entice the clients, the banks charged a lower interest rate initially and a floating rate after an agreed period of time.

Then two things happened 1. The interest rates started to go up. 2. The property prices started to moderate. Due to the increase of interest rates, the mortgage payments became high which many people could not afford. As property prices started to fall, many of them had negative equity (owing more than the value) in their home. Since, they did not put in any down payment, foreclosure seemed an easy option. As more and more foreclosed homes came into the resale market, the price fall accelerated leading to a full-blown crisis.

Banks are expected to do their due diligence, lend only to credit worthy individuals and ensure that a down payment is made on all mortgage transactions. In spite of all that, a small percentage of homeowners might still default on their obligations and foreclose their mortgage loans. In this case, diversification is useful; having a large pool of good grade mortgage loans will more than offset a few non-performing ones. However, if a bank had a large pool of loans (good diversification) made out to individuals with poor credit rating (low quality) without even a deposit, what good is diversification to the bank? If one loan fails, most likely all of them will fail too; and that is exactly what had happened.

To Summarize...

- 1. In engineered systems, adding factors of safety always increases the cost of construction. You must use thicker and stronger materials to cater to the increased design load. However, in an investment scenario, inclusion of a margin of safety always reduces the money paid for an asset.
- 2. Initial rate of return is actually the inverse of "P/E ratio". While the initial rate of return is in percentage, the P/E ratio is a number. The initial rate of return provides the current rate of return at the purchase price of the stock. Higher the initial rate of return, safer the investment.
- 3. Dividends are like 'the birds in hand', which obviously reduce your risk of holding stocks in the long-term. It is safer to buy only stocks that pay regular dividends.
- 4. The superior ability to produce excess earnings (growth) in the future periods is the only justification for the company to retain part or whole of its earnings.
- 5. Market crashes provide rare godsend opportunities to buy quality stocks (that have passed the 10-step analysis) at cheap prices. They also allow us to average-down some of our earlier purchases.
- 6. Dollar cost averaging is a strategy by which you can buy stocks for the same dollar amount at periodic intervals. This strategy does not require any time or skills to monitor the market, it allows us to average the purchase prices and it frees us from emotions since it works based on preset rules.
- 7. Adequate diversification is extremely important for the safety of the investment portfolio. The more number of quality stocks, the better it will be. Diversification will not work if most of the stocks in the portfolio are of low quality. Only after you have achieved quality, it is worthwhile to add quantity.

11. Angel Investing

(Being an Angel to Someone)

The investment should not be material to you compared to your overall wealth. However, for the company and its founders, the money must be make or break.

1. Who is an Angel Investor?

Most successful companies are started with a little capital, great ideas, bright and industrious founders. The expenses during the early stages of the business are usually met by the founders' themselves, their immediate family members and/or their friends. Once these funds get exhausted and if the business requires additional capital, the founders must turn to outside investors. At this stage the business may only be developing a product; therefore the cash flow from the business may be virtually non-existent. The suppliers of the desperately needed additional funds at this stage of the business are known as angel investors.

The angel investors are typically ultra rich individuals, private equity firms and in some cases even a government funded/subsidized organization. These entities always keep a look out for promising individuals with sound ideas who are in need of capital to take their companies to the next stages. Participating at this stage can turn out to be highly profitable for the investors because a decent minority percentage ownership can be obtained with a relatively small investment. If the business ultimately turns out to be good, even the small ownership can represent huge capital gains. However, the risk inherent at this stage is also very high which can result in full loss of capital and therefore this form of investing is considered highly adventurous. The angel investors allocate only a very small percentage (less than 5%) of their overall portfolio for such investing activities. In fact for some ultra-rich individuals, this form of investing is more of a hobby than anything serious and even a full loss of capital may not mean much to them; however, they derive enormous personal satisfaction upon success. The angel investors typically mitigate their overall risk by diversifying i.e participating in many such ventures; even if one turns out to be successful it can compensate for the failure of many others.

Obviously, this type of investing is not for everyone, as it requires deep pockets combined with willingness and ability to take risk with a time horizon of about 5 to 7 years. Additionally, and this one too is very critical, the investor must at least understand and appreciate the vision of the founders and believe (not hope) in the success of the venture. The angel investors may also further help the business in terms of providing business insights, finding future funding, and providing mentorship to the founders etc., which could be of priceless value to the success of the company. But the risk involved here is not the type of risk normally encountered in regular stock or bond investments. Most people familiar with typical stock investments understand losses like 10%, 20%, 40% etc.; only in a worst-case scenario, one expects a full loss of capital. But in angel investing, there is a big chance of losing the entire capital and small chance of reaping huge gains. So, logically I am very tempted to warn that this type of investing is too risky and therefore not suitable for the regular working class folks out there. Just leave this game to the big boys!

However, the reason I chose to include this form of investing in this book is because of the huge disparity between the risk and reward at this stage of investing. A relatively very small investment can bring in a large payout if the venture turns out to be a success. So, I suggest that if you ever come across an angel investing opportunity, especially if it comes from people you *know* and *trust*, then give it a serious consideration, knowing fully well the risk and reward conundrum.

2. Structure of an Angel Investment

Some of the most common methods of making angel investments are listed below:

- 1. You can become a minority owner by taking a direct equity stake (common stock) in the company.
- 2. You can buy convertible preferred stock in the company. The preferential stock entitles you a priority dividend from the company i.e. dividends are paid to you first before the owners are paid any dividend. However, if the company is sold to the third party or if it goes IPO, then preference stock can be converted to equity stake.
- 3. You can buy convertible debt in the company. You are then entitled to regular coupon payments and when the company is sold to the third party or when it goes IPO, the debt can be converted to equity stake. I don't consider this a very good method because if the company fails to make coupon payments, you may not be able to recover anything by forcing the company to bankruptcy.

Important Note: Any deal without an equity (or a conversion option) is not worth the risk and therefore is not recommended.

3. Financial Suitability

When you receive a proposal for angel investing, the first question you must ask yourself is 'Is this investment opportunity suitable to me *now*?'. Regardless of how great the investment opportunity, you will not participate in it if you cannot afford it. So, even before looking at the business, you must evaluate your own financial situation and psychological makeup, to determine your suitability. These opportunities are rare and fleeting, always demanding swift decisions from you. To help you arrive at a quick and well-informed decision, a list of self-evaluation questionnaire has been prepared. Study the list carefully and write your answer against each one of them. When you review them again, the decision must stare at you. It is highly advised that you involve another person (preferably your spouse) who knows you well to pose these questions and record the answers for making an unbiased evaluation.

a. Self Evaluation Questionnaire

- 1. What is the amount being considered in relation to your overall investment portfolio?
 - a. Less than 5%
 - b. Between 5% and 10%
 - c. More than 10%
- 2. Do you have the ability to face full loss of the capital?
 - a. Yes; it is only a very small portion of my portfolio and my income from the portfolio and a few months of my salary can easily compensate the loss
 - b. Yes; it is only a very small portion of my portfolio and the portfolio is well diversified
 - c. No; it is a substantial portion of my portfolio
- 3. Knowing that there is a big chance of full loss of capital, are you willing to take on this investment?
 - a. Yes; I can handle a loss of this size and I have done it before.
 - b. Yes; I can handle a loss of this size; but I have not faced a loss of this size before.
 - c. No; I cannot handle a loss of more than 5 to 10%.
- 4. What is your investment time horizon? i.e when do you require the funds back?
 - a. More than 7 years.
 - b. Between 5 and 7 years
 - c. Less than 5 years
- 5. Do you require cash flows from the investment to support your desired lifestyle?
 - a. No
 - b. No requirement; but additional cash flow will improve my lifestyle
 - c. Yes. I require cash flow to support my lifestyle

The above list is only a sample of possible questions and you may be able to come up with many more. By the time you answered the last question, you would know whether angel investing is suitable to you or not. If you have selected answer-c even once, then it *may not* be for you. You might possibly let this one go and wait for another one that is more suitable to your financial situation.

4. Evaluation of the Investment

After having assessed and concluded that you are suited (financially) to a particular opportunity, you may start with the detailed evaluation of other aspects of the angel investment. You must begin by requesting the founders to present a business plan for your evaluation. During the presentation you must evaluate both the human aspects and the business aspects of the proposal. Remember, at this stage of the business, the company may have no products to sell, no sales or cash flows. There may be no factories or inventories, therefore no hard assets. So, there may not be much to look at the balance sheet of the company. All you have is a bunch of smart fellows (founders) with some bright ideas, which may or may not make sense to you. So, you must pay more attention to the human aspects of the evaluation. Make use of the following questionnaire to help you with that.

Study each one of them carefully and write your answer against each question. You can choose more than one answer. It is good to involve another person (preferably your spouse) so that your evaluation may be rigorous and unbiased.

a. Human Aspects Evaluation

- 1. What is the "level of trust you have with the founder/s" based on?
 - a. Many years of previous business or social relationship with them
 - b. Few deals with them and/or occasional social contacts
 - c. No direct relationship with them; but they were introduced by mutual friends
 - d. Complete strangers up until the presentation

The question here is to understand the *basis* of your trust. But, the trust itself must be unquestionable. If you have any doubt on the trustworthiness then you cannot possibly proceed with the deal.

- 2. Are the founders passionate about this business?
 - a. Yes. They are visibly excited when talking about this business
 - b. Yes. The founders have burnt all the bridges and they are entirely dependant on the success of this business
 - c. Yes. But this is one of their many businesses
 - d. No. There is no passion; but they seem to be doing the right things.

If the answer to the foregoing question is c or d, then do not proceed on this venture.

- 3. What can you say about the harmony of relationship within the management team?
 - a. They seem to be enjoying working together.
 - b. There appears to be a clear division of power and responsibilities.
 - c. They seem to be getting along well.
 - d. There appears to be some disconnect within the team.
 - e. They seem to display ego among themselves.

It is hard to find the answer to this question in a single meeting or presentation. But keep your eyes and ears open to get any clues on the harmony of working relationship. If you see any signs of ego or discontent within the management team then be very cautious.

b. Business Aspects Evaluation

The following questionnaire will prepare you for the presentation by the founders. With this knowledge, you will be able to pose intelligent questions to them. You may be able to come up with many more questions, specific to the particular investment you are considering. Just remember that you may not be able to get answers to all the questions for some of them may be business secrets, which could not be revealed.

- 1. Do you understand the business plan and does it make sense? It may not make complete sense to you, but it must at least appeal to your common sense.
- 2. How confident are the founders regarding the business prospects? Ask how they think a business recession can affect them.
- 3. How informed are the founders regarding the potential clients, existing competitors? You must go into the presentation knowing at least the names of some of the clients and competitors just to 'act informed'.
- 4. What is the company's uniqueness? How differentiated are the products and services? This is one of the most crucial questions. The founders must be able to articulate (with passion) why their product and services are unique in the marketplace. You cannot afford to lock up your capital for a long period of time without knowing convincingly the answer to this question.
- 5. Will the products & services of the company make the world a better place to live? If the answer to this question is positive, then even a failure of a venture will not matter much to the angel investors. The knowledge that they tried to do something to make the world a better place will provide a greater comfort, regardless of the outcome.
- 6. Have the founders identified some possible downside risks? Get them to list the top 5 risks facing the company and address each one of them individually and in combinations.
- 7. What is the current capital structure and how will your investment affect this? The capital structure must at all times be aligned to the interests of the investors. This means, the compensation for key executives must be more in the form of share bonuses (not options) and less in the form of cash.
- 8. Will they require any additional funding? If yes, what will be the anticipated time frame? How will the additional funding change the capital structure? What are the chances that your stake in the company be diluted in the future? You may not be able to get all the answers, as this concerns future requirements. However, these questions and the answers thereof, will at least allow you gage the ability of the management to think ahead.

Try to get most of the questions answered to help you arrive at a more informed decision. In particular, watch out for any *evasive* replies. Although the focus is on angel investing, (by definition investing by an outsider) the due diligence procedure could be used to evaluate a business venture of a close relative or a friend. In such cases, the decision to invest could be a forgone conclusion taken purely on social grounds. But it is still no harm to scrutinize the business plan professionally using the above questionnaires to find room for improvement. After all, the objective here is to ensure that the investment turns out to be a success.

5. How to Exit an Angel Investment?

Assuming the venture turned out to be a success (you may get nothing if the company is a failure), some of the most common methods of exiting an angel investment are listed below:

- □ Initial Public Offering (IPO) is a process by which the company's shares can be traded publicly via stock exchanges. This is the most lucrative and profitable route.
- □ Merger and Acquisition (M&A) with a bigger company
- □ Selling your stake back to the founders or other buyers on a willingbuyer, willing-seller arrangement.

As you may have realized by now, exiting an angel investment is not very easy; the stake is not easily tradable. There is no ready market where you can sell your shares. So, you must have a very strong holding power.

6. More than the Money

If you aspire to be an angel investor, it is great if you possess the ability and willingness to provide *mentorship* to the founders, especially if they are young and inexperienced. If you have deep pockets coupled with the ability to mentor, then you certainly have a formidable winning combination.

The investment should not be *material* to you compared to your overall wealth. So, you will never *lose sleep* even if you lose the entire investment. However, for the company and its founders, the money must be *make or break*.

I am fully aware that 95% of the readers may never have an opportunity to be angel investors in the traditional sense. This is because people generally associate angel investing with high tech industry space. However, if you happen to offer financial help to your friend in return for a share participation in her new 'child care business', you can still call it as angel investing, provided the company is in its very early stage with no or very little revenue. And you can still make use of all of the principles described in this chapter to help you with your decisions.

To Summarize...

- 1. Angel investing requires very high ability and willingness to take risk.
- 2. It requires long time horizon, about 5-7 years.
- 3. Exiting (selling) an angel investment is comparatively difficult.
- 4. You must receive a direct equity stake or an option to convert (into equity) in return for your investment. Any deal without equity participation is not worth the risk undertaken.
- 5. Your investment should not be significant to you; but it must be make or break for the company and its founders.
12. Bond Investing

(Acting as a Lender)

Debt is one person's liability, but another person's asset.

Paul Krugman Nobel Laureate

1. Bond Basics

Investing in bonds simply means lending your money to the borrower. The borrower (bond issuer) is obligated to pay interest payments (coupon) at regular intervals and the principal sum at the end of the tenure (maturity). Bonds are also known as fixed income securities due to the *fixed timing* and *quantum* of interest and principal payments. Obviously the principal received at maturity will have less purchasing power than at the beginning due to the effects of inflation. The interest payments must therefore compensate for this reduction of purchasing power.

One day, if a stranger walks up to you on the street and requests you for a USD 2,000 loan, what would you do? Assuming you had the money on you then, would you readily offer the loan? Most likely you would not. Even if he says he would offer an interest of 8% when the bank is only offering 4%, would you reconsider your decision? Again the answer is probably a 'no', because of the simple logic that you don't know the person well enough. It seems reasonable not to part with your hard earned money to strangers.

On the other hand, if a small shop owner in your street were to request a loan of USD 2000, what would you do? You may consider positively on the basis that firstly, you know the person well and secondly as a customer of the shop yourself, you are probably confident of his ability to service the debt.

What if the same person were to ask you for USD 20,000 instead of USD 2,000? Surely you will become apprehensive about the prospects of repayment and may even decline at first. Then he must do at least two things to convince you into offering the loan; (1) provide some good reasons for the loan and (2) sweeten the deal with higher interest rates. You require justification for the loan and an adequate premium for taking the risk. Only when both the requirements are met will you part with larger sums of money.

Now, let us assume that the shop owner offers a collateral for the loan. That is, if he fails to honor his obligation, his shop will automatically belong to you. Presence of the collateral makes the loan so much safer. However, in return for making the loan *safe*, the shop owner would naturally demand some compensation in the form of *lower* interest rate. So, all else being equal, safe bonds will attract (pay) lower interest rates (coupon) than relatively unsafe bonds.

This is the reason why risk-free Treasury securities (Local currency Government bonds) pay less interest than risky corporate bonds.

We had earlier seen that the inflation will affect the purchasing power of the cash flows from the bonds and therefore the interest payments must compensate for this. The longer the time to maturity, the higher will be the effects of inflation on the cash flows. Moreover, risks (e.g. default risk) involved are much more in long term bonds than in short-term bonds. From this we can conclude, all else being equal, a 10-year bond must have a higher coupon (interest rate) than a comparable 5-year bond. You can readily observe this phenomenon in the bank Fixed Deposit rates also. The longer term fixed deposits command higher interest rates than short term fixed deposits.

Based on the above discussion, let us now summarize the basic ideas on bond investing.

- 1. Adequate knowledge of the borrower is necessary; in particular the knowledge to assess the borrower's ability to make the periodic coupon payments and the principal on maturity.
- 2. Bonds with collateral are safer than, otherwise similar, collateral-less bonds. Safe bonds offer lower interest rate than relatively risky bonds.
- Longer duration bonds require additional compensation for the risks (over the longer span) and reduction of purchasing power; so interest rates of longer duration bonds must be higher than that of shorterterm bonds, all else being equal.

2. Types of Bonds

The table below provides a partial list of bond types.

Sr No	Bond Types	Features	Remarks
1	Sovereign Bonds, Local currency	Issued by Country's cen- tral governments in local currency	Example: Yen denomi- nated bonds issued by Japanese government
2	Sovereign Bonds, Foreign currency	Issued by Country's central governments in foreign currency	Example: US\$ denomi- nated bonds issued by Japanese government
3	Sovereign Bonds, 'Common' currency	Issued by Country's central government in 'Common' currency	Example: Euro denomi- nated bonds issued by Spanish government
4	Municipal & Quasi- Government Bonds	Issued by Quasi Govern- ment & municipal govern- ments	Two types, Taxable or Tax-exempted
5	Corporate Bonds	Issued by a Corporation, in any currency	
6	Zero coupon Bonds	Discount bonds; No regu- lar interest payments	Example: US Treasury bills

Table 12.1 Bond Types—Partial List

7	Callable Bonds	The issuer has the right to call the bond (repay the principal) earlier than	
		maturity	

Not every type of bond available in the market is listed in the table above. Asset Backed securities (ABS) and Mortgage backed securities (MBS) are some types of fixed-income securities backed by assets such as car loans, credit card loans, mortgage loans etc., They are also known as Collateralized Debt Obligations (CDO). Moreover, you will also come across many financial products such as 'structured notes' and 'structured funds'. Some of them even promise capital protection as one of the features. You must remember that these products are generally far more complex investments than stocks and bonds. Structured products in general will have combination of debt instruments and at least one derivative instrument embedded in their structure. The risk/return characteristics of the whole product are then a combination of risks and returns of the individual instruments.

Consider an example of a structured note with a bond and a derivative instrument. In this case, the structured note has at least three default risks namely, (1) Default of the bond issuer, (2) Default of the counter-party of the derivative instrument, (3) Default of the issuer of the structured note. Any one of these defaults can affect the return performance of the structured note considerably. Capital protection means nothing if the bank that issued the structured note has become bankrupt. Depositor's insurance will not protect investments under such schemes. Capital protection therefore cannot be equated to being 'risk-free'.

These instruments require high degree of research and due diligence which are not practical for working class retail investors. So we will not cover them in this book. Just to give you an idea, the now infamous Lehman 'mini bond'¹ is a type of bond, wherein the underlying assets were linked to US sub-prime mortgage assets (debt) combined with some derivative elements such as Credit Default Swap (CDS) in their structure. So, when you see the words ABS, MBS, CDO, CDS, 'Structured' etc., in a product prospectus, do be very cautious.

3. Bond Quotes

The bond prices are quoted typically in *percentage* terms. The price of a bond at-par is 100. When the bond prices are above 100, they are known as above-par (premium) bonds and when the bond prices are below 100, they are known as sub-par (discount) bonds. The bond prices are quoted as bid and ask prices. A typical quote for a bond is

Bid 97.63 Ask 97.87

If you must buy this bond, you can do so at 97.87 and if you must sell it, you may do so at 97.63. The difference between them is called *spread*; in this case it is 0.24 (97.87 minus 97.63). Spreads may or may not include brokerage commissions; you will need to check with your broker about this. You must also

ask your broker if the quote includes the interest accrued from the last coupon payout day to the date of purchase. If the interest is included then it is known as 'dirty price' and if not included it is known as 'clean price'. The bond buyer is always expected to pay the seller the dirty price (price of the bond + the accrued interest).

Let us assume that you bought a bond on 1^{st} June. This bond pays annual coupon on 31^{st} March each year. In this case, you must pay the accrued interest from 1^{st} April to 31^{st} May to the seller of the bond at the time of purchase. However, you will get this money back when you receive the coupon payment (from the bond issuer) for the full-year on 31^{st} March, the following year.

4. Capital Gains and Losses at Maturity

When you buy a sub-par bond, say at 97.87, you will realize *capital gain* upon receipt of the principal (face value, 100) on maturity. Similarly, when you buy an above-par bond, say at 103.65, you will realize a *capital loss* upon receipt of the principal (face value, 100) on maturity. So, regardless of the price at which you buy a bond, on maturity, you will receive only the face value, 100. Then you might ask, why would anyone want to buy a bond at 103.65 (premium bond) knowing very well that he/she can get back only 100 on maturity? The answer is, it is OK to buy a premium bond if it can offer higher interest payments than the market interest rates prevailing at that time. We will focus more on this subject in a later section on 'Interest rate risk'. But before that we must first learn how to do valuation of a bond.

5. Bond Valuation Spreadsheet

Let us value a 100 face value bond paying a 5% annual coupon with 4 years to maturity. The prevailing market interest rate also is 5%. We will list the required data for doing the calculations

Number of periods–4 years Interest payable–5% per annum (\$5 coupon payments every year) Face value–100 Prevailing interest rate–5%

Open up a new Microsoft Excel[®] Spreadsheet and enter the values as below. The first two rows and columns have been left out for entering appropriate titles and descriptions.

Cell C3: Enter the value for FV, in this case 100 Cell C4: Enter the value for PMT, in this case 5% (5% of 100) Cell C5: Enter the value for N, in this case 4 (maturity) Cell C6: Enter the value for I/Y, in this case 5% (prevailing interest rate) Cell C7: Enter "=PV(C6,C5,C4,C3,0)"

Given the above data, you will see the value 100 in cell C7, which is the current value of the bond. If you wish to purchase this bond today, you must pay 100, ignoring commissions and spreads. This is the example of an at-bar

bond. The value in C7 will be in brackets indicating that it is a negative sign. This means that you will need to make this payment to buy the bond, cash flow out *from* you. Note that FV and PMT are positive values indicating cash flows *to* you. This spreadsheet can now be used to value any option-free bond.

6. Bond Risks

Although, bonds are traditionally thought as safe investments, they do have many risks, such as credit risk, interest rate risk, liquidity risk, pre-payment risk etc., We will discuss only the most important bond risks in this book.

a. Credit Risk (Default Risk)

The *credit risk* is one of the most easily understood risks of all. It is the risk of failure of the issuer (borrower) to pay up the interest or principal at the stipulated time. What happens when the borrower defaults on his obligations? The bondholders may force the issuer (borrower) to bankruptcy and claim its assets as per the debt covenant. The assets are then sold and cash distributed to the bondholders. In some cases, the bondholders may take over control and restructure the whole company.

When an entity (corporation, municipal councils, country etc.,) plans to raise capital by issuing bond, it may engage the services of a credit rating agency such as S&P, Moody's, Fitch etc., to rate its bond issue. The rating agency will then evaluate the entity for its ability to honor the obligations (credit risk) and issue a suitable credit rating. Each agency has its own system of rating. For example, S&P issues 'AAA' and Moody's issues 'Aaa' as the highest rating, indicating extremely high capacity to repay the debt. You may find more useful information on rating from the websites of the rating agencies such as Moody's, S&P and Fitch.

http://www.moodys.com http://www.standardandpoors.com http://www.fitchratings.com

It must be remembered that it is not mandatory for an entity to obtain any debt rating at all. If the bond issuer is financially very sound, it can attract enough number of bond buyers even without any debt rating. But many institutional investors, such as pension funds, could not participate in those bond issues (based on their own internal guidelines) that do not have minimum ratings. In order to attract interest from a larger pool of prospective investors, most entities seek favorable bond ratings. In fact, without a good rating many entities will not be able to raise capital from the bond markets.

However, the current rating system does have an inherent problem in that the rating agencies are actually compensated (for their services) by the debt issuers themselves. This can be a major source for conflict of interest. 'It is like one of the parties in court paying the judge's salary or one of the teams in a competition paying the salary of the referee', according to a US Senate Hearing report². The rating agencies are widely criticized for their gross failure to properly evaluate

the risks of the structured US sub prime debt securities that led to the fall of Lehman Bros eventually culminating in the global financial crisis of 2008.

Nevertheless, the market participants take the credit ratings from the rating agencies very seriously. The downgrade or upgrade of a bond issue (by one of the rating agencies) can result in abrupt changes in the bond and stock prices. As of writing this book, S&P downgraded US government debt from AAA to AA+ that resulted in massive gyrations of stock markets worldwide.

The crux of the credit risk stems from the ability (or inability) of the bond issuer to honor its obligations when they become due. It must also be remembered that the bond issuer must be able to service the loans from the cash flows from its operations and not by selling some of its assets. So, the primary objective of any credit analysis is to ascertain that the cash flows of the issuer are strong enough to support debt servicing.

b. Interest Rate Risk

The *interest rate risk* is another serious risk that affects almost all kinds of fixedrate bonds. It affects even the risk-free (local currency government issued) bonds. Recall the valuation of the bond we had done in the previous section. Assume you bought this bond (risk-free) at 100 (ignoring commissions and spreads). Let us say, the central bank (Federal Reserve in the US) decides to decrease rate from 5% to 4%; the value of the bond would suddenly increase to 103.63, representing a capital gain to your bond portfolio (paper gain). In your spreadsheet, if you enter 4% in cell C6, you should be able to see the value 103.63 in cell C7. Based on the calculation, we know that the value of the bond has increased; let us now see the logic behind it. At a time when the market interest rate is only 4%, this bond that offers 5% interest is more valuable to the investors, thus demanding a premium (above par). Obviously increasing bond prices is NOT a risk for the bond buyers.

Now let us assume that the central bank increased the interest rate to 6%. In your spreadsheet, if you enter 6% in cell C6, you will see the value 96.53 in cell C7. This is because, this bond has lost its attractiveness with only 5% interest while the prevailing market interest rate is 6%. You would have a capital loss (paper loss) in your portfolio. Increasing interest rates has caused the price of your bond to fall and this is the gist of *interest rate risk* for the bond buyers. What you can observe is that the bond prices and interest rates move in opposite directions. When the interest rates decrease, the bond prices increase and vice versa.

Assume you are able to hold this bond till maturity. If you are happy to receive the regular coupon payments and the principal at maturity, will the price fluctuations in the interim matter to you? Actually there will be no difference to you if you are holding a bond till maturity. On the other hand, what if you can't hold the bond till maturity? We had seen earlier how the increasing interest rate, decreases the value of the bonds. As you are not sure of the interest rates and therefore the value of your bond at the time of selling, you would worry about

this interest rate risk. If you must sell when the interest rate is at its peak, then you will suffer capital losses.

So, how can we mitigate the interest rate risk? You may buy long-term bonds when the interest-rates are high and buy short-term bonds when the interestrates are low. This is a very simple and effective way of mitigating the interestrate risk. As of writing this book, most of the developed world is in a very low interest rate environment. The interest rates have been kept at historic lows for many years now, to stimulate growth. In spite of low interest rates for prolonged periods of time, the central governments of the western nations do not feel inflation as a threat yet. So, for now it is safe to buy only short-term (less than 5 years) bonds, as they are much easier to hold till maturity.

c. Liquidity Risk

The *liquidity risk* involves in the ability (or the lack of it) to get out of an investment without affecting the current price levels. There must be adequate trading volume, implying the presence of large number of willing buyers and sellers ready to transact on a daily basis. For example, if you owned a bond for USD 100,000 and the daily volume is only USD 50,000 then you may have huge problem to get out of your position in a single day. If you must sell, whatever the motivation be, you must bear with lower offers from the buyers. On the other hand, if the daily volume were USD 2 million, then selling your bonds will pose no big threats at the current pricing levels. To mitigate this risk, you must invest only in large issues, with high daily volume compared to the value of your exposure. If you intend to hold the bond till maturity, then liquidity risk is not something you need to worry about.

d. Prepayment Risk

The *prepayment risk* is the risk of borrower (bond issuer) returning the principal (calling the bonds) earlier than the maturity. This is one of the most serious risks in bond investing and we will see why this so. Assume you (borrower) had taken a mortgage loan from a bank (lender) at a fixed interest rate of 5%. Two years after you had taken the loan, let us say, the interest rates have fallen to 3%. At this moment, the bank is glad to have offered you the loan at 5%, which is higher than the current 3%, but obviously you will not be happy. So, you would refinance the mortgage loan from another bank, effectively returning the capital from the first bank that charged higher rate and borrowing from the second bank that charges the current lower rate.

Having received the money earlier than expected, the first bank is unable to redeploy the money at 5% any more. This represents a loss to the bank (lender). Now, let us assume that the interest rate has gone up to 7%. Obviously you would be happy to have locked-in the interest at the previous lower rate. However, the bank is not so happy, but it just can't do anything about it. The predicament of the first bank effectively describes the prepayment risk. The right to prepayment is

inherent in mortgage loans. As a compensation to offer this right to the mortgage loan borrowers, banks usually charge a *premium*.

With this understanding on the prepayment risk, we will continue our discussion on bonds. Unlike mortgage loans, not all the bonds have prepayment risk. Only the callable bonds (bonds with *call* option) have this risk and for this reason the issuer must offer a higher premium (higher interest) than comparable option-free bonds to attract interest from investors. Always remember, the call feature is an option, which the issuer may choose to exercise or let it lapse. As a bond investor, the chance of receiving the principal earlier (than maturity) in a low interest rate environment is the gist of prepayment risk.

This can be a problem particularly for retired people who depend on coupon payments from high yielding bond investments to meet their living expenses. If a bond is called suddenly and the principal returned in a low interest environment, it might not be possible to meet the regular income needs, thus one may have to take a hit on the retirement lifestyle. We had seen earlier that the decreasing interest rates increase the value of bonds and vice versa. This may not necessarily apply to callable bonds because large drops in interest rates will motivate the bond issuer to call the bond and issue another one with lower coupon rate. Due to the presence of the call feature, the price increase (due to falling interest rates) of the callable bonds will be muted than that of the comparable option-free bonds. So, the bottom line is this; if you are dependant on stable cash flows (from your investments) to maintain your lifestyle, then the bonds with call feature may not be for you.

7. Yield to Maturity (YTM)

In the section on valuation of bonds, we had calculated the current price of the bond given the other 4 parameters viz., face value (FV), coupon rate (PMT), maturity (N) and interest rate (I/Y). In most bonds, the values for FV (face value), PMT (coupon payment) and N (number of periods) are constants. The face value will always be 100; the number of years to maturity cannot change; and so is the coupon rate. The only variables are PV (present value) and the interest rate (I/Y). However, we know that there are many risks involved in bond investments (in addition to the interest rate) that affect the value (PV) of a bond. So, the question is how the 'riskiness' of a bond is incorporated into the bond valuation?

The answer is: everything that will affect the value of the bond viz., prevailing interest rate, credit risk, interest rate risk, other risks, premium for call features etc., are all *clubbed together* into a single number known as yield to maturity (YTM). And the YTM is then used in place of interest rate (I/Y) for the valuation of bonds.

YTM is also the rate of return of the bond held till maturity. The YTM and the value of the bond (PV) have inverse relationship; as the YTM increases the bond value decreases and vice versa.

a. How to calculate the yield of the bond, at a given market price?

Let us calculate the YTM of a 4-year *risky* corporate bond that makes coupon payments of 6% per annum (paid annually), the face value at 100 and the present value at 102. The prevailing interest rate is 5%. Open up the Microsoft Excel[®] Spreadsheet and enter the values as below:

Cell C11: Enter the value for PV, in this case 102 Cell C12: Enter the value for FV, in this case 100 Cell C13: Enter the value for PMT, in this case 6 (interest of 6% of 100) Cell C14: Enter the value for N, in this case 4 Cell C15: Enter "=RATE(C14,C13,-C11,C12,0)"

In cell C15, you will see the value 5.43%, which is the Yield to Maturity (YTM) of this bond. Since the interest rate is 5%, the balance 0.43% (5.43% - 5%) represents the sum total of all risks inherent in this bond. Further, this calculation assumes that the regular coupon (interest) payments received by the investor will also be put to use to receive interest at 5.43%. But if the coupon payments were spent (e.g. used to meet retirement living expenses), then the actual yield would be less than the calculated YTM.

What if the market price of this bond is 90 instead of 102? We will assume that the interest rate had not changed. Replace 102 with 90 in cell C11 and you will observe the value of 9.09% in cell C15. It means that the investors are now demanding higher premium to invest in this bond, which is why the yield (YTM) had increased. Since interest rate had not increased, the bulk of the increase must have been due to the deterioration of credit quality of the issuer. The rating agencies evaluate the credit quality of the issuers and then provide ratings to the bonds. These ratings have profound effects on the yield of the bonds and consequently the prices of the bonds.

Let us look at another example. If you hear news from the media that says, 'Portugal's 10-Year debt yield is 15%', this means 15% implies the sum total of all the risks inherent in this bond issue. As an example, one could break-up the yield (15%) into many components; for example, 4% for the prevailing interest rate, 10% for the credit risk and 1% for liquidity and others. So, if the risk of default begins to recede, the 10% that represented the credit risk could drop to 6%, making yield 11% on this bond. Decreasing yield must increase the value of the bond implying better credit conditions. On the contrary, deteriorating credit conditions can cause the premium for the credit risk to rise, pushing the yield higher and the bond prices lower. In such cases, the premium required by the investors for taking the credit risk is far higher than the interest rate and other risks combined.

8. Sovereign Bonds

Bonds issued by the national governments in foreign currencies are known as Sovereign bonds. By definition, local currency bonds issued by national governments with the ability to print the currency (local) at will are credit *risk-free*. So, we can easily deduce that US Treasury bonds, Yen denominated Japanese Government bonds, Rupee denominated Indian Government bonds, Singapore Dollar denominated Singapore Government bonds, (just to name a few) are considered credit risk-free. However, we can't extend this logic to Euro zone countries, because individual Euro zone countries like Greece, Italy and for that matter even Germany, could not print Euros at will; the printing press is under the control of European Central Bank. If Greece and other peripheral Euro zone countries had the power to print Euros at will, there wouldn't be a Euro zone crisis now!

Using the above definition, bonds issued in foreign currencies by national governments (sovereign bonds) are risky. We had seen earlier that if the bond issuer defaults on its obligations, the bondholders could force the bond issuer to bankruptcy and claim its assets. The bondholders can even take control of the entity and restructure. But what if the issuer (borrower) happens to be a sovereign nation? If a country's government defaults on its bonds (sovereign debt), obviously you can't take over and run the country! You would lose a great deal of money, peace of mind and sleep on such occasions. Even though these events are very rare, they do happen from time-to-time.

As a working class retail investor, you may not have the necessary skills and time to understand and comprehend the issues related to sovereign bonds. We had also discussed that the central theme of credit analysis is to ascertain that the cash flows of the bond issuer are sound. Evaluating a country's cash flows can be a challenge even for industry experts. US Hedge fund Long-Term Capital Management (LTCM) nearly collapsed during the Russian Default in 1998 and more recently, MF Global went bankrupt due to over (leveraged) exposure to Sovereign debt issued by Euro zone countries. So if you wish to invest in Government bonds, I strongly advise you to invest only in local currency dovernment bonds, provided the country is able to print the local currency at will.

9. Corporate Bonds

Bonds issued by business entities are known as corporate bonds. All corporate bonds have credit risk inherent in them. To compensate for this risk, investors will demand higher yield (than local currency government bonds) from the issuers. A company with strong financials is required to pay lesser yield compared to another one with shaky financials. In general, companies that issue high-yielding bonds are perceived to be financially weak by the market participants. Such bonds issues may also have lower ratings by the rating agencies. This does not mean their bonds will default in future. But, the higher yield must be seen as the compensation to bear higher risk.

As a general rule, perform the 10-step analysis discussed in the earlier chapters on a company. If you find a company fit for investing in its stocks, then its bonds must be safer, because bonds are safer than stocks. So, every company

that is in your wait-list for stock investing can be safely considered for its bonds also.

In addition, as bonds have fixed maturity and are generally safer than stocks, we may relax some of the conditions set out for stock investing, leaving the bare minimum as listed below:

- 1. Step-1. The company's business must have a definite competitive advantage. Companies that compete on price alone do not qualify, even if they offer higher yields.
- 2. Step-3. The companies having strong unions that engage in hardball tactics do not qualify.
- 3. Step-6. If you are not satisfied with the company as a customer, then you may want to give its bonds a miss.
- 4. Step-8. Debt servicing capacity. Normally rating agencies use interest coverage ratio (EBIT divided by the interest expenses) as one of the criteria; but we are using a much more stringent condition which is the ratio of debt to the net earnings ratio.

Revisit the chapters 7 & 8, and perform at least the above four steps to evaluate the company before investing in its bonds. Always remember, what is the main purpose of investing in bonds? You want the safety of principal and regular interest payments. If this is so, there is not much point in assuming too much risk for a few percentage points of additional yield.

10. Zero-coupon Bonds (Zeroes)

Zero-coupon bond is the last type of bond we will discuss in this book. As the name suggests these bonds do not pay any regular coupon payments. Because of this reason, these are also known as pure discount instruments. Continuing from the example we had used in Section-5, Bond Valuation Spreadsheet

Cell C3: Enter the value for FV, in this case 100

Cell C4: Enter the value for PMT, in this case 5 (5% of 100)

Cell C5: Enter the value for N, in this case 4 (maturity)

Cell C6: Enter the value for I/Y, in this case 6 (prevailing interest rate)

Cell C7: Enter "=PV(C6,C5,C4,C3,0)"

In cell C7, you will see 96.53, which is the value of the regular coupon bond.

Now, enter the value '0' in cell C4 and you will observe 79.21 in the cell C7, which is the value of the zero-coupon bond. The difference 17.32 (96.53 minus 79.21) is the excess amount the company must pay to compensate for the *absence* of regular coupons.

US Treasury bills are zero-coupon issues. You pay 99.xx for a typical 60day treasury bill and you receive 100 on maturity. We had seen earlier that yield to maturity (YTM) calculation assumes that the coupon payments must be reinvested at the same rate as the YTM which may not always be possible. This is known as reinvestment risk, which is solved with zero coupon bonds; the calculated YTM becomes the actual YTM since there are no coupon payments to be reinvested. This means we are sure of the yield right at the time of investment; there are no uncertainties that can affect the yield of the zero-coupon bond. For this reason, zero coupon bonds have a definite advantage over the regular coupon paying bonds.

From the perspective of working class retail investors, investing in zerocoupon bonds (zeroes) is good for risk-free government or quasi-government issues only. However, investing in zero-coupon *corporate* bonds is an extremely risky affair. This is because the company must pay a higher yield to the bond investors to compensate them for the lack of regular coupons. You must ask why would a company choose to pay higher yield instead of paying regular coupons? It means the current cash-flow situation may NOT be sound. It also means that the company may be over-stretching itself on some projects, the outcomes of which could be a *make or break* for the company. As a rule of thumb, I strongly recommend against investing in such zero coupon corporate bonds and refrain from investing in stocks of such companies also, unless you are a sophisticated investor or a trader. If I had known this myself, my friends and I could have avoided some serious losses on stocks, as many companies that had issued zerocoupon bonds had defaulted, rendering their stocks worthless. Always remember, the company must make the grade to be in your wait-list.

11. Mitigating the Bond Risks

Based on the discussions in this chapter, you can appreciate that investing in bonds is not all that safe. The risks involved in bond investing can be very serious even for professionals. However, if you understand the risks involved and mitigate them properly, then investing in bonds need not be too risky.

By now, you must be clear as to why you wish to invest in bonds. Is it for capital gains or for regular interest payments? If it is for capital gains, then I must warn you that the tools in this book may NOT be adequate to carry out a DIY style investing in bonds. However, if it is to provide regular cash flows i.e. twice a year coupon payments, then you can safely follow the ideas presented in this book.

To help you provide a clear understanding, the following table has been provided summarizing the bond risks along with some common methods to mitigate them from the perspective of working people.

Sr No	Bond Risks	Types of Bonds	How to Mitigate?
1	Credit Risk	Local Currency Government Bonds	No credit risk to mitigate
	-do-	Sovereign Bonds	Refrain from investing directly in sovereign bonds. Bond funds or bond ETFs are safer alternatives as they provide diversifica- tion.

Table 12.2	Bond Risk Mitigation—Summa	ary
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	-do-	Corporate Bonds	Perform 10-step stock evaluation process. A company that qualifies for stock invest- ment automatically qualifies for its bond investments also. Refrain from investing in zero-coupon corporate bonds and also from stocks of the company that issues zeroes.
2	Liquidity Risk	In all bonds	No liquidity risk if you intend to hold the bond to maturity. Otherwise, invest in only big issues with high daily volume of trades
3	Interest Rate Risk	In all bonds	No interest rate risk if you intend to hold the bond to maturity. Buy long-term bonds in a high interest rate environment and short-term bonds in low interest rate envi- ronment. Reinvesting the coupon payments at high interest will help somewhat to offset the value drop of the bond (due to increas- ing interest rates)
4	Prepay- ment Risk	Only in callable bonds	The callable bonds will offer better yield than comparable option-free bonds. People who require stability of income should refrain from investing in bonds with call features.

Bond index funds and bond ETFs offer an easy and cost-effective way of getting exposure to bonds. Furthermore, index funds and ETFs provide inbuilt diversification, which is certainly much better than having direct exposure to a few individual bonds. Default or downgrade of a single bond issue will not adversely affect the price of index funds and ETFs. However, you must dig deeper to ascertain the investment quality of all the major constituents of the bond funds and ETFs before making your investment. Our discussions on diversification in an earlier chapter holds good for bond investing as well.

To Summarize...

- 1. Even though bonds are traditionally considered as safe 'instruments', they have many risks.
- 2. Interest rate affects all the bonds. The value of bonds has inverse relationship with the interest rate. Increasing interest rates will result in decreasing bond prices and vice versa. Buy long-term bonds in a high interest rate environment and short-term bonds in low interest rate environment.
- 3. Credit risk is the most serious risks of all; investors can lose substantial part or even the entire investment in bonds. The rating companies like S&P, Moody's and Fitch evaluate the bonds and provide a credit

rating. Ask your broker for the rating of the bond you are interested in.

- 4. Invest in bond issues that are much bigger than your investment so that you can easily get out of it without impacting the price.
- 5. If you are looking for stable income from your bond investment, then callable bonds may not be for you.
- 6. Yield to Maturity (YTM) represents the sum-total of all risks-rewards inherent in a bond issue, which ultimately determines the value of the bond (PV). All other parameters (coupon PMT, number of years to maturity N, final value FV) in a bond calculation are constant.
- 7. Yield to maturity of zero-coupon bonds is fixed at the time of purchase, as there are no uncertainties on reinvestment returns.
- 8. Zero-coupon *corporate* bonds (zeroes) can be extremely risky; the stocks of the companies that have issued such bonds can be even riskier.

13. Dealing with the Chatterbox

(Round-the-clock coverage)

You will find not one situation when the 'glass is completely full or empty'; it is always half-full. So, it is up to the 'people in the know' to spin their own story about the half full or half empty glass.

1. Financial Media

As an investor, you will get bombarded daily with a myriad financial information, earnings reports, earnings estimates, various estimates of economic data, statistical data of many kinds, flash estimates and so on. Some of them are facts while many of them are opinions of people who are *expected to know* more than the common man on the street. As in most aspects of life, you will find not one situation when the 'glass is completely full or empty'; it is always half-full. So, it is up to the 'people in the know' to spin their own story about the half full or half empty glass. Opinions are the cheapest commodity on earth and you will have full flow of it for 24 hours. Always remember, the media does a fantastic job in doing 'post-mortem' of anything after it had happened. So much so, the common people tend to think that it has the power to predict the future. But, the media doesn't do anything stupid like predicting the future because it means they must take a single position on everything. Instead, the media thrives on supporting all the contradicting views. With this strategy, it is hard to go wrong. It is so common to see justifications for both boom and doom predictions within the same day's publication. How can both futures be possible? If an investor sincerely follows everything the media has to say, he will end up buying something in the morning only to dump it later in the evening!

The financial media are run by business enterprises, which operate under constraints of viewership and advertising revenue. In order to boost both, they require big stories. So, it should not be very surprising when you find them making 'mountains out of molehills'. Financial media plays a major role in deciphering the meaning of economic reports released by government agencies. A couple of thousand more people claiming for unemployment benefits in the US can affect the stock markets all over the world. Sometimes I wonder, with all the money lost over a single report, it would be easily possible to find those couple of thousand people new employment for life!

Because of the inherent nature of the media to blow things out of proportion, the financial markets are said to be efficient in the short-run. The prices of securities tend to adjust to all available data relatively quickly. However, if we always follow the media, we will completely miss the big picture. By concentrating on the day-to-day, week-to-week issues, everyone but the geniuses, miss the impending crises or rare opportunities.

Most people get interested in the financial media only after they enter into a position. I have heard this from many traders and clients that they get a 'knee shaking fear' immediately after entering into a position, even before encountering any serious losses. When you are living in fear, obviously you will seek comfort, you need to hear arguments that support your views; half the media will offer you that support. Your own inherent nature to be 'right' will block those arguments that do not support your logic. In behavior finance, this type of behavior is known as *confirmation bias*; investors tend to seek confirmation from other people to justify their own investment decisions. Besides providing comfort, the arguments that support our views do not make us any better; actually, we should be looking out for the contradicting views (which will also be available in plenty in the financial media), if we are serious about learning anything new.

There is no such thing as a single investment idea, tip or a strategy that will work all the time. If such a thing exists then it is nothing short of a currency printing press; no one would want to part with that kind of knowledge. If you are hooked on to the media looking for a magic tip, be reminded, it does not exist. For every issue, there will be someone arguing for and someone else against; you will never be able to come out with a clear head unless you are able to remove the clutter and concentrate on the core issue yourself. This ability requires, above all, a good knowledge of your investments. If you think like the partner of a cake-shop (see earlier Chapter), you will automatically know if you must lose your sleep over the couple of thousand people losing job in the US or not!

2. Analyst Reports

Another source of information that reaches the retail investors is research reports. There are basically two types of research., viz sell-side and buy-side research. The research carried out by analysts employed by stock broking companies whose main focus is to *sell*, to generate more sales volume and commissions is known as 'sell-side' research. As a retail investor you will have access to 'sell-side' research only. While institutional investors are the primary consumers of these research reports, most retail investors also receive them free of charge from their broking houses. Upon opening a security trading account with a broking company, most often, the client has a privilege of receiving the company's research reports. This assumes, of course, that the broking company is large enough to have a research department. The research carried out by large fund management companies for their own consumption is known as buy-side research.

3. Sell-side Research

The sell-side research reports typically contain Buy/sell/Hold recommendation and 1-year price target in addition to many other details about a company. Due to the necessity to provide short-term price targets, the process of research involves collecting and sifting through a large amount of financial and economic data, statistical results and predictions, assimilating them and then formulating an opinion based on a reasonable set of assumptions. So, the end result can at best be called as 'informed guess'. The quality of research depends very much on the appropriate selection of the data and methodology used in the process and the probability of those predictions turning out to be correct. There is always a large degree of 'guess work' in the process. The assumptions used in the research always affect the 'target' prices indicated in the research reports which in turn may impact the buy/hold/sell recommendations.

Investors, who depend solely on research reports for their investment actions, may be shocked to find that the prices do not always correspond with the recommendations and the reports always play catch-up with the reality. An initial 'Buy' call tends to be followed by several 'buy' calls with increasing targets and an initial 'Sell' call' followed by several 'sell' calls with decreasing targets. Sometimes the changes in target prices occur in as little as a couple of months. You might also notice the recommendation and the target prices arrived at by many analysts following a company tends to be very close to each other. No one wants to rattle the market with a 'sell' call when everyone else is issuing a buy call. Being in a group gives a strong sense of security even if the whole group is proven wrong later. The personal cost of going against the crowd and to be proven wrong is far too high in this business; the fallen mavericks will be subjected to ridicule, they can lose their jobs and not be able to find new ones; so the analysts tend to be very conservative in their estimates.

The analysts also tend to continue with a 'buy' recommendation with lowered target price than an outright 'sell' recommendation. In most jurisdictions, 'naked shorting' is not allowed. It means that if you don't have the shares, you can't sell them, unless of course, you make arrangements to borrow the shares before selling them. In any case, for a normal retail investor this additional step of borrowing makes 'shorting' difficult. Hence, for a broking house a 'sell' recommendation means less business (because the retail investors may not participate in short selling) and a 'buy' recommendation means more business. It is no wonder that analysts are quick to issue 'buy' recommendations and slow to issue 'sell' recommendations.

Having noticed only the negatives so far, we must also acknowledge the fact that these analysts are generally bright and hardworking individuals. They typically do their analysis on a few companies in the same industry and as a result they tend to become 'industry experts' over time. So, we should not ignore the reports completely nor should we accept them unconditionally. I will make the following suggestions on how to use the research reports.

a. When you receive a research report with a 'buy' recommendation, subject the company to the 10-step analysis. If the company fails the analysis, then your research on the company stops right there. If the company passes most of the steps, then it makes into your 'wait-list'. You must buy only subject to the valuation and the margin of safety

principle we had discussed in previous chapters. The research report, however, may have done a great job of identifying a good company to you, without which you would have never known this company. So, research reports are not to be treated as an end-result in investment decision-making, but to be held merely as a starting point.

- b. When you receive a research report with 'hold' or 'sell' recommendation, then you must look into the report for details for the downgrade. If the reason is of temporary nature and if the company still passed the 10-step analysis, then this could be a good opportunity to buy shares. The report tells you that the mob is going to go in one direction; its time for you to be a contrarian.
- c. You will come across research reports issuing 'buy' calls with increasing price targets quarter after quarter for some companies. These companies may be experiencing super fast growth in sales and earnings, but unfortunately the price of their shares may have grown steep also. If you are able to buy them cheap it is like dream come true. The problem with super fast growth companies is that their high growth may not last for long. When that happens, the prices will fall, never to rise to the previous levels. If you strictly followed the valuation and the principle of the margin of safety, you will be able to avoid buying these stocks at high prices.
- d. During crisis type situations, similar to the one encountered during 2008 global economic crisis, it is best to ignore reports altogether since writer of the report is in no better position to predict the impact of such crisis than any other investor. Every one of the previous crises had resulted in phenomenal fall in asset (stock) prices; but as soon as the crisis situation had been successfully handled the recovery in the prices also had been remarkably fast. Falling for such 'doom' reports will make you sell your assets at the worst possible time, that is right at the bottom; you will never be able to make up for your losses.

4. Buy-side Research

The fund management companies undertake research for their own internal consumption. As their main motive is to invest their own money (as against brokers whose motive is to generate more sales) the research is known as buyside research. It may not be possible for an ordinary investor, for that matter any other investor, to get hold of buy-side research reports. We can only observe the results of such research from the actions (buy/sell) of these fund management companies. For instance, if a large investment company is taking a huge position in a stock then we may conclude that their research is bullish about this company and vice versa. This is based on observation made on statutory filings that these fund management companies periodically make to the respective stock exchanges. It may appear to be a sound practice to simply 'piggy back' on the

ideas of some of the renowned investors' and funds'. However, such a 'copy-cat' strategy may not necessarily work for you due to the reasons listed below:

- 1. These fund management companies may have a very long time horizon for their investment, which may not be consistent with your own time horizon.
- 2. These companies usually handle their investments in a portfolio concept; that means their portfolios are typically very well diversified and even though an individual investment may appear to be very large it may only be a small percentage of their overall portfolio.
- 3. We can get to know of the buy/sell decisions of the funds only when we read the filings to the stock exchanges; so the news is always 'old' and the prices could have moved already.

Having said, it would still be a good discipline to monitor the transactions of these investment companies and famous investment gurus from time-to-time. As suggested in an earlier chapter, GuruFocus.com (<u>http://www.gurufocus.com/guru-stock-picks</u>) is a good source of this information. Instead of simply copying their (investment) actions, you must put the company through the rigorous evaluation process and the margin of safety, prior to undertaking any investment actions.

To Summarize...

- 1. For every matter of significance, the media supports conflicting opinions; you can never come out of it with a single idea with which you can base your future course of action. After all, the media thrives on supporting all the contradicting views. With this strategy, it is hard to go wrong.
- 2. The ability of the financial media to carry out post-mortem of events is phenomenal; however, its ability to forecast is dismal.
- 3. Differentiate between facts and opinions of 'experts' when you expose yourself to financial media.
- 4. The objective of the sell-side research is to provide 'short-term' targets, not necessarily suited for investors with longer time-horizon.
- 5. It may not be possible for an ordinary investor, for that matter any other investor, to get the buy-side research reports. We can only observe the results of such research from the actions (buy/sell) of these fund management companies.
- 6. Generally, sell-side research reports and the buy-side actions provide good leads for investment. However, the 10-step process and the safety of margin must be used at all times.

14. Investing Psychology

(The Other 50%)

I can calculate the motions of heavenly bodies, but not the madness of people. Sir Isaac Newton

1. Market Cycle

I am sure you have experienced the feelings of being at the top of the world, everything seem to work, people trying to help you out of their way, your relationships at their best and then all of a sudden, without any warning, something bad happens that puts you back in your original place! Then we realize almost philosophically that everything in life runs in cycles. It is very much possible the warning signs were always there, but the euphoria of success had us on the blinders, leaving us completely unprepared and vulnerable. Similarly, when we are at the down cycle, misfortunes seem to happen in unrelenting succession with no ray of hope on the horizon. May be the rays of hope were always there, it is just that our mind had gotten overly clouded by all the surrounding negativity, that we failed to recognize their existence. The whole human experience is one of duality, if there is a top then there must be a bottom, if there is light then there must be darkness and so on. This of course, does not apply to some enlightened individuals who have transcended the duality, but then we don't expect them to trade in the financial markets!

The participants in the financial markets (buyer and sellers) are basically people like us. So, it is no small wonder that the collective activity of the market participants result in what appears to be a cycle, causing wild gyrations of prices. What goes up must come down (think of gravity) and it generally does. Similarly, what goes down must go up (think of buoyancy) also. This line of logic works very well for markets as a whole; not necessarily for individual companies. The principle of buoyancy did not work for many 'dot.com' companies, who are yet to see their historic highs again while quite a number of them went out of business rendering their stocks worthless and out of the monitor screens.

We shall now see how a cycle is formed in a financial market, using a real life example of the prices of rice. It is commonly said that the 'greed and fear' rule the financial markets and it will be interesting to watch them in action. But we will also see that there are many other factors that go into making of a market cycle.

2. Formation of Peaks (High Points)

Let us begin by assuming the price of rice at its long-term average; the rice market is in equilibrium and the media is not talking about the prices of rice. At this point, let us assume, heavy rains devastated production of rice in the rice producing countries. The prices of rice will naturally increase due to *expectations of shortage*. If the expectations became real, the prices will continue to head up. During these periods, some unscrupulous people and merchants may hoard (greed) rice resulting in an acute shortage of rice, leading to further increase of prices. *When it rains it pours*: if at this time the rice producing countries impose export ban on rice (fear of local food inflation), the prices will skyrocket creating new peaks in the cycle. Let us summarize below the sequence of events of the above scenario.

Causes		Effects
Heavy Rains (fundamental)	>>>	loss of production
Loss of production	>>>	shortage of rice
Shortage of rice	>>>	Price increase
Price increase	>>>	Hoarding
Hoarding (greed)	>>>	Further increase of prices
Further increase	>>>	Export ban by Governments
Export ban by Governments (fear)	>>>	price peaks

Table 14.1 Cause & Effect—Formation of Price Peaks

As we can observe, the whole thing started with a fundamental cause, which is the loss of production due to heavy rains; the initial price increase can be attributed to this. But the subsequent price increases that caused the peaks are due to other contributing reasons, in this case, the human greed (hoarding) and fear (Government interventions).

3. Formation of Troughs (Low Points)

The prevailing high rice prices will motivate the farmers to produce more rice the following season. Assuming no natural calamity, higher production of rice will naturally result in *expectations of over supply*, which will cause the prices to drop. When the Governments of the exporting nations see the bumper crop, all the existing export bans will be lifted. This will cause the prices to fall further. If all the farmers are debt free (not in financial stress) and if they are able to store their excess produce at reasonable cost, then the prices may not fall further. But, if some farmers are heavily indebted (in financial stress), they will be forced to sell their produce at any price causing steep falls in prices. Let us summarize here the sequence of events of the above scenario.

Causes		Effects
Price peaks	>>>	motivation to the farmers to produce more
Motivation to produce more	>>>	More production of Rice (fundamental)
More production	>>>	over supply
Over supply	>>>	Price decreases & Lifting of export bans by Governments
Lifting of export bans	>>>	Prices fall further
Price falls	>>>	Financial loss to the farmers
Financial loss	>>>	Force selling to cover the losses & to pay back debt
Force selling of produce	>>>	Steep falls causing troughs

Table 14.2 Cause & Effect—Formation of Price Troughs

Summary

The initial causes of the price increase or decrease are usually fundamental in nature. In this case the fundamental causes are, the heavy rains that caused the price rise and the over supply that caused the price fall. The effects of these fundamental causes on the prices are usually not so spectacular. However, external factors like debt, greed (hoarding) and Government interventions etc., aggravate the situation by prolonging the crisis and along the way create the higher peaks and lower troughs of a market cycle. The phenomenon described for a commodity (rice) works perfectly well in other financial markets also. I have chosen the rice market for this illustration because soft commodity (agricultural products) cycles are much faster than others such as stocks, bonds etc., which makes the explanation easier. And also to recognize the fact that Japanese rice traders were one of the earliest groups of traders who had discovered human psychology in the price patterns.

4. Bull and Bear Markets

A market cycle is made of two phases, boom and bust phases. During the boom phase, 'bulls' are said to be in control (of the market) causing the prices to soar higher and higher. On the other hand, during the bust phase, 'bears' are said to be in control causing the prices to drop lower and lower. Traditionally, boom phases last longer than the bust phases. The boom and bust phases of a market cycle are also known as *bull* and *bear* markets.

During the bull markets, if someone bought a high volume stock, even without doing much research, most likely he/she will end up with gains; no great stock selection skill is required. After a few initial gains in a bull market, people tend to think that they have the required skills to do the job. The reason for their success can at best be attributed to the bull market and not to their brains. Thus the famous saying that goes, *don't mistake bulls for brains*, which implies making money in a bull market does not require much skills. The bull markets are also very forgiving; even if you made a mistake in buying a stock (that you should never have) the bull market will generously forgive you by offering opportunities to get out of the stock, thereby correcting your mistake without much pain.

Unlike the bull markets, the bear markets are vicious and very unforgiving. They always come unannounced and carry out the destruction swiftly. If you are a retail investor with a fulltime job, you are disadvantaged with respect to the speed of information in addition to the other handicaps like skills and time. This is not to say the professionals are able to accurately predict the bear market either. But at least they have the time to watch the screens during the market hours to take some corrective measures, unlike the majority of retail investors who must spend most of their waking hours in factories, workshops, offices and other work places with little access to market prices. Before they know, even their profitable positions can quickly turn into huge losses contributing to many sleepless nights.

5. Debt and Emotions

If you are able to read and comprehend the contents of this book, then you must be experientially aware that debt affects our emotions. Our inability to payback our debt on time can cause huge humiliation and personal despair. For most grown-ups there is nothing more scary than unpaid debt as the mere thought is enough to bring chills down their spines. Who's afraid of ghosts anyway? The decisions you make when debt-free will be significantly different from those when you are in debt till the neck. How these decisions affect your wallet is the focus of this section.

Let us assume you want to buy shares of a company for USD 5,000 after doing due-diligence. You are reasonably happy with the future prospects for the company and you have also considered the margin of safety. You can go about doing this in two ways; 1) on cash 2) on margin (using debt).

a. Cash Trading

Under cash trading, you pay the full USD 5000 in cash for your shares, and of course, some more for the commissions and taxes (not considered in this illustration for simplicity). Let us assume, you are using your spare cash to fund your purchase, which means you have a very long time horizon. This money also could have been from your retirement account and assuming your retirement is 20 years from now, you also have a very long time horizon.

At the end of the year, if the value of the stock appreciates by 10%, i.e. to USD 5500, your return on your capital is 10%. (USD 5500–USD 5000 = USD 500 divided by your capital USD 5000). On the other hand, if the value drops by 10%, i.e. to USD 4500, your return on capital is -10% (USD 4500-USD 5000 = -USD 500 divided by your capital USD 5000). The price increase or decrease could have been due to some fundamental cause, which could be company specific, industry specific, economy specific or it could be due to a global macro-economic

reason. But, if you performed the 10-step evaluation and found that the company is solid, you wouldn't be overly worried about the decrease in price of your stock. As your investment time horizon is 20 years, this drop will not even catch your attention and you may not even care to look at the prices on a daily basis.

b. Margin Trading

Now, let us introduce debt financing and see what happens to our emotions. We will again assume that you wish to buy stock for USD 5,000. However, in this case, you only have USD 2,000 in cash from your savings. This money also could have been from your retirement account and assuming your retirement is 20 years from now, you would have a very long time horizon. The balance USD 3,000 must be funded by debt. To do this you require a *margin account* from your stockbroker. You must deposit your USD 2,000 as your equity capital in your account. This is the *initial margin*. As a precondition to the loan, you must maintain a minimum amount in your account at all times, say USD 1,500. This amount is known as *maintenance margin*. Let us assume, the balance USD 3,000 loan carries an interest rate of 5%. The stock broking company will keep your shares as collateral for the debt.

Now, let us consider 10% profit and loss scenario as before. At the end of the year, if the value of the stock appreciates by 10%, i.e. to 5,500, your return on your capital is 17.5% [USD 5,500–USD 5,000 – (USD 3,000*5% interest)] = USD 350 divided by your capital USD 2,000). By taking the loan, your return on equity had increased 1.75 times the increase in the stock price. This is the power of magnification (made possible by the debt) working in your favor.

On the other hand, if that stock drops in value by 10%, i.e to USD 4,500, your return on capital is negative 32.5% (USD 4,500–USD 5,000 – (USD 3,000*5% interest) = – USD 650 divided by your capital USD 2,000). Now, in this case, the same power of magnification (due to debt) is working against you. So, debt (leverage) always magnifies both your profits and losses at different rate; for the same 10% stock returns, the positive magnification is 1.75 times while the negative magnification is 3.25 times. The risk-reward ratio is awfully tilted to the negative side due to the interest payment on debt.

With a paper loss of USD 650, your equity in your account would be reduced to USD 1350 (USD 2000–USD 650), which is less than the maintenance margin requirement of USD 1500. Your stockbroker will send you a margin call notice (usually a telephone call) intimating you of your losses and instructions to top up your account to the tune of USD 650 (initial margin USD 2000–equity USD 1350) within a specified date and time (usually less than 2 days). If you fail to make the required top up, stock broking firm has the right to sell your shares. This is one of most nightmarish situations to be in for any investor, particularly for a novice retail investor. You could be in your office attending a meeting or with your family enjoying yourself or at a special 'date' when the margin call notice is served on you. From that moment forward till you settle your margin call, you cannot concentrate on anything else; the market *had consumed you*! To avert

forced selling by your broker, you must act real quick to top up your account. Subsequently, even if the price of your stock did not fall further, you must still pay the interest at 5% on your debt slowly depleting your account.

If you are unable to make the required top up within the specified date and time, your broker will eventually force-sell your shares. Then the USD 650 paper loss will end up as real loss. So, the moment you are on debt (leverage), you will be more inclined to watch the stock prices with a fear of loss. This will put you in such an emotional roller coaster that you may become a slave to the market news and prices. Such behavior causes investors to act irrationally. Your time horizon of 20 years does not matter any more. You can be easily influenced by everything anyone has to say in the financial news channels or write in the financial news bulletins.

If your research on a company is good, the historical earnings capacity is solid and the future earnings capacity of the company is not affected in any way then you should actually be feeling happy that the stock price has fallen. Because you may now have an opportunity to accumulate more shares thus reducing your average purchase price. If you were not in debt already and still left with some spare cash you might probably do just that. But if you are already in debt, you will not be able to take advantage of a good buying opportunity, and worse still, you will not be able to even recognize it, as you would be consumed by fear (of loss). Thus, buying shares with borrowed money will make you a slave to the whims and fancies of the market.

6. A Speculator's Cycle of Emotions

Most speculative investors undertake the investment operation with the hope of making a quick buck in the short-term. It is often said, when the man-onthe-street gets involved in the market, it is usually at the top of the cycle. The optimism is at its peak, recession has become a distant memory, so far away it is almost forgotten, economy is doing fine, people are getting good bonuses and they have excess free cash. This is when psychologically they are most unprepared for any disaster. After winning a couple of times with smaller stakes, both their confidence and ego get jacked up. With all these great news flooding the market combined with the newfound confidence gained from some recent investment success, most investors will not think twice about going into the market with *increased stake, sometimes with borrowed money*. This is when they are at their most vulnerable and the Murphy's Law always seems to work bringing in a devastating bear market.

We will begin at this point in the market cycle and move along the cycle to dissect various stages of the disaster in the making and present the corresponding roller coaster of mental states of the speculators.

a. Market Still Goes Up!

After they buy the stock, the market makes some more advances. Obviously the investors are delighted with their ability to invest successfully. They have been

proven right yet another time and their confidence and egos shoot through the roof. But, if the investors do not have any clue about the intrinsic values of the stocks or the underlying business of the companies, they will continue to hold them in their hope to make more profits. After all, it worked for them before and there is no reason to believe otherwise. On top of it all, they have convinced themselves that they have necessary skills to make money in the market. How did they do that? It is because; they have already made money from the market not just once but a few times already, so it must be due to some skills that they possessed! This line of reasoning is very intuitive and at the same time pleasing to our egos so it is not so hard to believe. The key emotions here are *greed and hope* that prevent them to take profit.

b. Slight Decline

Now let us assume the market starts its decline, the small profit has disappeared into the break-even position. They will try to reason that this is only a temporary pull back, not to worry so much. They are also thoroughly convinced that the markets will go up eventually. It is at this precise point when the decisions of the normal investors on the street and that of the professional traders are likely to diverge. Just a couple of weeks before, both these classes of people may have been bullish about the prospects of the markets. But now, while the man on the street will continue to hold on to the original views, the professional traders aided by their skills, time, ability to interpret news and charts may not necessarily be bullish and will start to watch the market with *caution*. The man on the street however, simply hopes that the stock will head higher soon and takes no action at all. The key emotion is *hope*; the emotion of greed would have subsided by now.

c. Further Decline

The price declines further and they face some modest losses. At this time, their frame of mind is still locked in the memories of the good time. Our mind always locks itself with memories of the recent past for emotional support, when the present is distinctly different from the past. Instead of accepting the present as the *new* reality we tend to anchor ourselves onto the past memories, good or bad. This phenomenon is commonly known as *anchoring*. The combination of the three factors viz., overconfidence in their 'skills', ego and anchoring will not allow them to accept their mistakes and cut losses early. After all they have convinced themselves that they have skills! Cutting loss at this time would mean that they have failed, albeit once, implying lack of skills. Accepting this reality is a huge problem for the egos. So, they take no action at all due to the three dominating influences *overconfidence*, *ego*, *anchoring*. Remember at this time, most professional traders would have cut their losses and would be out of the market. Some of them could even be 'shorting' the market (this means that they enter positions that will yield them profits when market fall).

d. Short Term Goals Converted into Long-term Goals!

The prices fall further wiping out all the earlier gains combined. They now start to have some initial doubts about the stocks. Now again instead of facing the situation squarely, they give a reason to themselves that this investment is for the long-term. They are able to afford to leave this money in the market. It is 'after all, I don't need this money now, it is for my retirement so I can wait for it to recover' mentality. This is one of the most fatalistic approaches, because they are now convinced that the prices will not recover in the short-term, which is contrary to their initial objective. However they are paralyzed to take any action because they are consumed by the influence of *denial*. It is at this time, the value investors will begin to look at the markets with increasing keenness, expecting with eager, the great discount sale.

e. Fear Sets In!

The price continues to fall and heavy losses are mounting. The investors would kick themselves privately and regret their decision to get into the market in the first place. Some people may begin to look at the company's financial statements; after all, they are supposed to have skills! Some others might spend their free time watching prices and charts. The emotion of *fear* sets in. Tossing and turning on the bed becomes the order of the day, oops ... order of the night! The financial media starts to report news of corporate bankruptcies; the unemployment rate is on the rise and the consumer confidence drops. The financial media fill the universe with pessimism and negativity. The investors think of cutting their losses, but still take no action. On the other hand, value investors are loaded with cash, readying themselves for the impending action.

f. Panic!

The prices fall further as if something has fallen from the sky wiping out more than half the value. The acceleration of the decline may be partly due to force selling of shares in the margin accounts. With so much of paper losses, most investors might stop looking at the portfolio statements sent by their brokers. It is just too unbearable to look at them; they prove the fact that they have no skills, but had been merely lucky because bull markets had been too kind with them in the past. So, they concentrate more on their day jobs and watch television at night instead of spending time on their investments. They just don't want to know anything about the prices. Oh yes, there is yet another thing. It is the loneliness. They don't share their misfortune with their spouses and family members. It is nightmare if they told them; it is nightmare if they didn't! So, they prefer to suffer alone. Still no action taken, even though they are panic-stricken and would love to get out of the markets at the next available opportunity. The dominant emotion is one of *panic*. On the other hand, the value investors start to build their positions by entering into the market now. After all, they have been waiting for this very opportunity to buy, when there is panic on the Wall Street (stock market) and panic on the main street (economy).

g. Relief Finally!

Now, the prices are still falling but not a lot. The market appears to be taking a breather. In technical terms, it is called 'consolidation phase' before the big move in either direction. The financial news media continue to spew negativity and pessimism about the future. Being convinced about the negativity of the market, during this long waiting period, most people would finally get their 'senses' and sell their shares with a sigh of relief. The dominant emotion at this time in the market is *prolonged fear & relief*. Finally they have been *freed from the tyranny of the market*. The paper losses have been finally converted into realized losses. However, this may be the precise time when the market had bottomed and begun to head higher, but the speculators are all but long gone out of the market. On the other hand, the value investors may continue with their purchases, as the stocks are priced cheap compared to the earning power of the companies. Speculators, having been burnt so badly, would not dare to enter into the market for a long time, until perhaps near the top of the *next* cycle!

This illustration may help to understand, how speculators manage to 'buy high' and 'sell low', cycle after cycle, thereby funding the entire market.

7. What Motivates Your Actions?

At any point in time, you can have only four choices among which you must choose one as your decision. The choices are 1) to buy, 2) not to buy, 3) to sell and 4) not to sell. What else is there? You might quickly point out that both 'not to buy' and 'not to sell' tantamount to 'doing nothing', so in effect there are only three choices. As we will see in this topic, although the final result is 'inaction', the motivations can be quite different. We will examine the predominant motivations for each of the four choices in this section.

If you have a history of stock trading behind you, you can analyze your own motivations for some of your past actions against your own track records. You can then know for sure, which motivations have worked for you consistently and which ones did not. After reading each of the motivations below, take a few minutes to reflect on your investment track records and write your own experiences in the space provided in the tables below.

Sr No	Motivation	Reasons	Did you use this in the past?	If yes, did this work for you?
1	Conviction that the business is good and the price is reasonable	Genuine profit seeking		
2	Hope that the price will rise	Speculation		
3	Chasing the market	Fear of getting left out		

Table 14.3 Motivation 'To Buy'

Motivation-1

To buy with conviction that the business is good, earnings are good and price is cheap compared to the intrinsic value of the stock. If you have done the 10-step evaluation and found that the company and its earnings are good, then most likely the price *will not* be to your liking. You would have to really wait for a long time for the stock market 'discount sale', which happens only in the bear market. It is at this time, you will find value investors like Warren Buffett buying stocks in frenzy. It is also at this precise time, the financial media will be preoccupied with everything negative. This motivation offers the most compelling reason for a retail investor to buy into the stock market with the highest margin of safety.

Motivation-2

To buy in hope: This decision involves the emotion of hope as a predominant motivator. The investor (speculator) makes a buy decision in the hope that the price will rise in the future without doing the required research on the company and finding out the intrinsic value of the stock. This is clearly a speculation operation and in direct contrast with all the ideas laid-out in this book because conviction backed by research is lacking. As we have seen before, most investors undertake the investment operation with the hope that their stock prices will go up in the short-term. If that happens, their confidence soars, and ego develops. They think that their stock selection is correct. They also think that they have superior skills. With that confidence, they usually get back into the market with an increased stake. The truth is that most investors are unaware that they lack required skills and time to consistently do well in the market. So, if you wish to decide based on hope you must not use more money than that allocated for 'gambling' activities. This is covered in the chapter on asset allocation. 'Buying in hope' is 'Buying in vain'.

Motivation-3

This decision involves in a unique combination of multiple emotions such as regret and the fear of being left out of the market; in the process, the investor ends up chasing the market. In an ever-increasing market, this is quite easily possible. Assume that you had bought the share at USD 10 and sold it at USD 20 making a good profit. The intrinsic value of the stock at the time of the sale was USD 15; so selling the stock appeared to be a wise decision. But the price of the stock keeps on increasing. Initially you tried to ignore it, but when the price reached USD 25, you *regret* selling it too early (of course, in hindsight) and feel that you had missed a great opportunity. And worse still, your colleagues are making huge paper profits by holding onto the stock and you naturally feel left out. So, you go ahead and buy the stock at USD 25 even though the intrinsic value is only USD 15. This operation is called *chasing the market*, the motivation for which is provided by a combination of regret, greed and the fear of being left out of a great money making opportunity. The reason for greed is because of the

excess desire to profit in spite of knowing that the intrinsic value is far lower than the purchase price.

It is said that Sir Isaac Newton, initially had made some handsome profit in South Sea stock¹. After he sold his stock, prices kept on increasing. Convinced by the bullishness, he had invested more money chasing the stock. Eventually, when the prices crashed, he had lost a lot more. 'I can calculate the motions of heavenly bodies, but not the madness of people' said Newton, summing up his experience!

Sr No	Motivation	Reasons	Did you use this in the past?	If yes, did this work for you?
4	Company/Business is not good or the Price is too steep	Genuine Caution/ Investment Disci- pline		
5	Fear that the price will fall further	Over caution, especially after a recent loss		

	Table 14.4	Motivation 'Not To Buy
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Motivation-4

'Price is too high' is a great reason for not buying a stock. It implies that you have carried out an evaluation of the company and you are convinced that the business is good, earnings are good but the price is too steep. The only thing to do is to wait for a good opportunity to enter. Patience is truly a virtue in investing and those who have it will be amply rewarded. Having said, 'not doing anything' is the greatest skill we must master for a long-term success in the stock market.

Not to buy a stock because *the company or its business or its earnings are not good*. After all, no one is compelling you to invest in any stock; buying or not buying is your prerogative. If you don't buy a stock because the company or its business or the consistency of its financial results is not to your liking, then it is a wise decision. You can always look for other opportunities. Remember markets *live* forever; opportunities will keep springing up.

Motivation-5

Not to buy because of the fear that the price will fall further. This typically happens particularly after heavy recent losses. Most speculators would not dare to venture into the market immediately after losses; in fact they would be relieved to have gotten out of the tyranny of the market. This line of reasoning is in direct contrast with that of the value investors as they are on the lookout to buy when the market is in a state of panic and the valuations are at their bottoms. So, if you have done your 10-step evaluation on your stocks, you would actually be looking forward to *fear* in the market so that you may hope to get some bargains.

Sr No	Motivation	Reasons	Did you use this in the past?	If yes, did this work for you?
6	Prices are too high	Genuine Profit taking		
7	Stop Loss	Following a discipline		
8	Fear that the prices may fall further	Realizing losses after riding on losers for very long		

Table 14.5 Motivation 'To Sell'

Motivation-6

To sell because the prices are too high. This means that you have carried out an evaluation and convinced that the stock price is too high compared to the earnings potential (and calculated intrinsic value) of the company. It is a great reason to become fearful and sell your stock in panic to realize profits.

we simply attempt to be fearful when others are greedy and to be greedy only when others are fearful²

Warren E Buffett

Berkshire Chairman's Letter-1986

From time-to-time, stock markets go through periods of 'irrational exuberance' when the asset prices get unduly escalated. It is not uncommon to see stocks of even mundane companies valued at P/E ratios of over 40. While the logical justification for such lofty valuations may be 'high expected future growth', widespread speculation also plays a key role in almost all such instances. If the high growth fails to materialize in the future periods, the whole thing can crumble like a pack of cards. And always, it is the last man holding (the stocks) will bear the brunt of the coming Armageddon. So, being fearful during the periods of speculative frenzy will certainly serve your wallet very well.

While this is the most sensible thing to do, you must be aware of a huge problem you might face when you execute a strategy like that. In a bull market it is possible to see stocks overvalued for long periods of time before a market correction. So, you may get into a situation when you had sold quite early in an uptrend, but the market continues to head higher. If this happens, you might regret having sold early. Recall our discussions in Motivation-3 above. You must resist the temptation to get back into the market at higher prices to chase the market. This is very serious because even the most sensible investors can be tricked into becoming speculators because of the fear of 'getting left behind'.

Motivation-7

To sell, in order to limit losses using 'stop loss' discipline. This is the greatest risk management tool available to safeguard investors from their own irrational behaviors. Stop loss actually adds a good discipline to the whole investment process. Let me first explain how 'stop loss' works before describing its benefits. Let us say, you bought shares of a company at USD 10. Even though you were bullish about the future prospects of the company, you had decided that you would not tolerate a loss of more than 10%. In this case, you would sell the share when the price drops to USD 9 (10% loss). If your tolerance were 15%, then you would sell the stock only if the price drops to USD 8.50 (15% loss). By entering a stop loss order, you have limited your losses to a comfortable level (whether 10 or 15%).

If you have followed the 10-step valuation process rigorously and you have found the intrinsic value of the stock higher than the stock price, logically, price drop may be an opportunity to accumulate more stock at lower prices. *The question of 'stop-loss' does not arise for value investors.* There are some caveats however for this hypothesis.

- a. You must carry out the 10-step valuation process again as a counter check. You must be confident of the company's prospects.
- b. The reason for the price drop must be due to macro level issues affecting the overall market, not necessarily some company specific or sector specific issues.
- c. If it indeed is a company specific or sector specific bad news then you must analyze the bad news to ensure that it is only a temporary phenomenon; it should not affect the future prospects (earnings and cash flows) of the company.

Items b & c above requires more skills and time. If you are not confident of your ability to analyze the company in light of the new developments, then you are much better off to implement stop-loss and move on with other companies on your wait-list.

Motivation-8

To sell because of fear and panic: The investor wants to sell stock in the *fear* that the price will not rise and *panic* that it may fall further. Go back and read the Section-g 'Relief Finally' under 'A speculator's cycle of emotions' discussed earlier. In this case, the speculator gets into the state of fearfulness and panic after suffering huge paper losses and decides to sell because he/she is unable to hold (emotionally) on to losing positions any longer. Heavy loss of capital combined with negative emotions such as guilt, anguish and fear can provide the necessary motivation to sell. Upon selling, they may even experience a feeling of relief. But unfortunately, when they finally sell, the market may actually be turning up, which could very well be the worst possible time to sell.

Sr No	Motivation	Reasons	Did you use this in the past?	If yes, did this work for you?
9	Strong conviction about the company's earning power	Letting the profits to grow		
10	Hope that the price will rise	Pure Speculation		

Table 14.6 Motivation 'Not	То	Sell
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Motivation-9

Making a decision 'not to sell' based on the conviction that the business is good, earnings are good and the stock price is still not ridiculously expensive. If you have done the evaluation and found a great company then it is sensible to let your profits grow. Warren Buffett is known to hold his stocks for *decades*, thereby allowing his investment to earn compounded rate of return over a long period of time.

In fact, when we own portions of outstanding businesses with outstanding managements, our favorite holding period is forever 3

Warren E Buffett

Berkshire Chairman's Letter-1988

The key here is how well you know the company and its products. Perform the 10-step process and the stock valuation once in a while to confirm if the criteria that got you in this position, are still being met. Many of us make the mistake of going in and out of the same stock many times increasing both the brokerage and capital gains taxes (where applicable). But, the money not paid in brokerage and taxes will add directly to our bottom line.

Motivation-10

Making a decision 'not to sell' based on the hope that prices will increase further. If you are a speculator, you are obviously in for quick bucks, and the only rationale (to invest) is hope. However, even if you followed the ideas in this book and did proper research and valuation, it is possible to make some genuine mistakes. The company's prospects could have drastically changed after you have bought shares in the company. By the time you realized the mistake, the stock prices may have moved against you quite a bit. What do you do now? Having realized the mistake, you must be on the lookout for an opportunity to sell your shares.

Even though I had earlier said 'bear markets' are unforgiving, it is not entirely true. Bear markets do provide some windows of opportunities to get out of bad investments, but the problem, is most retail investors never realize them. When the prices are heading down, the professional traders armed with the knowledge of technical analysis (and plenty of time to monitor the markets) are known to 'short' the markets. This means they sell the stocks or indices without owning them in the first place. At some point, they must 'buy' back the shares to lock-in (realize) their profits. What they had accomplished is '*Sell high* first' and '*Buy low* later'. This buying back activity causes the prices to rise, providing godsend opportunities to correct our mistakes by getting rid of bad investments. Holding on to the stocks of weak companies 'in hope' for better future can be extremely costly.

8. Stop Loss

A long time ago I had read a real life story in Reader's Digest, which illustrates the concept of 'stop loss' in a non-financial setting. A middle-aged man, while on a family vacation in a beach resort, went on motor skiing with a younger male companion. After they went some distance into the sea, the jet-ski of the older man stalled; he faced two choices 1. Abandon the faulty jet-ski and return back to the shore with the younger man or 2. Stay on the faulty machine and wait for the younger man to go back to the shore and bring help. The first choice meant definite forfeiture of USD 5,000 deposit paid for renting the jet-ski, therefore he sent the younger man back to the shore while he stayed put awaiting help. As soon as the younger man disappeared on the horizon, he realized it was a grave mistake, but it was too late to correct then. He had hoped that the help would arrive in about fifteen minutes.

When nothing came after an hour his hope turned into panic and then to despair. The darkness of the night slowly engulfed the light and he resigned to his fate of spending the night alone, cold and vulnerable. Unfortunately, the undercurrent of the sea was slowly transporting him away from the spot where the younger man had originally left him. So, the people on the shore could not locate him. He held on to his dear life frightfully for 51 hours before a passing ship, as a mere chance, spotted him at a distance and brought him to safety. The definite loss of USD 5,000 had prompted him to risk his life in the endless ocean. According to Behavior Finance, people fear and therefore avoid definite losses, hold on to their losing positions much longer in the hope of breaking-even, and in the process, stand to lose much more than the original loss. This phenomenon is known as 'loss-aversion'.

If you are entering into the market as a speculator, you can't survive long with out a robust system for stop loss. In fact, this is probably the only saving grace available to the speculators. If you throw a frog in boiling water, it would jump out instantly, whereas if you throw it in tepid water and heat up slowly it will cook to death. A good stop-loss system should get you out like the 'frog in the boiling water'. If you are a speculator, you may not have the system to know the difference between a good investment and a bad investment. So, the stoploss is the only panacea that can work for both good and bad investments, as it ensures limited losses. How to set stop-losses?

1. The stop loss must be decided at the time of purchase of the stock, not later. Some people keep adjusting the stop loss setting downwards as the stock price drops. Let us assume, you bought a stock at USD 50 a share, and you do not want to lose more than 5%. In this case, your stop-loss should be USD 47.50. Suppose the price drops to USD 48 the next day, bringing it too close to the stop-loss setting. At this point most people would be tempted to move the stop-loss setting lower to say, USD 45, to 10% instead of the original 5% loss. This is a recipe for disaster.

2. On the other hand, it is OK to increase the stop-loss setting to protect your gains. In the above example, let us assume that the stock is moved upwards; say to USD 55 a share. Then you can increase the stop-loss setting to say USD 52, thereby protecting your gain of USD 2 per share. Some trading systems allow you to do this automatically using a 'trailing stop-loss' order.

You must have noticed that the 'stop-loss' runs contrary to the concept of value investing. When the prices drop, value investors will be buying, not selling. So, you must use 'stop-loss' only when you are not sure of your investments, IPOs and other purely speculative endeavors. If you know the company is sound, it makes a lot of sense to buy some more to average down your price.

To Summarize...

- 1. The initial causes that affect the equilibrium prices are usually fundamental in nature. However, external factors like debt, greed (hoarding) and Government interventions etc., aggravate the situation by prolonging the crisis and create higher peaks and lower troughs of a market cycle.
- 2. Making money in a bull market does not take too much intelligence and hence the famous saying, 'don't mistake bulls for brains'.
- 3. The bear markets are vicious and very unforgiving. They always come unannounced and carry out the destruction swiftly.
- 4. The decisions you make when debt-free will be significantly different from those when you are in debt. The moment you are in debt (leverage), you will be more inclined to watch the stock prices with a fear of loss. This will put you in such an emotional roller coaster that you may become a slave to the market news and prices.
- 5. Stop-loss runs contrary to the concept of value investing. So, you must use 'stop-loss' only when you are not sure of your investments, IPOs and other purely speculative endeavors.
- 6. The stop loss must be decided at the time of purchase of the stock, not later.
- 7. If you are a speculator, you may not have the system to know the difference between a good investment and a bad investment. The stop-loss is the only panacea available to a speculator.

15. Asset Allocation Decision

(Don't put All the Eggs in One Basket)

If you think you have even a slightest gambling instinct then set aside a fixed dollar amount to engage in such activities.

1. Why Asset Allocation?

Asset allocation is the process of dividing your investments into various asset classes such as cash, bonds, stocks, real estate, commodities, gold etc. One of the biggest advantages of asset allocation is its benefit of diversification, thus goes the famous saying 'don't put all the eggs in one basket'. The process helps you to achieve your overall goal without having too much risk exposure to a single or a few assets.

There are two types of asset allocation techniques viz., strategic asset allocation and tactical asset allocation. The strategic allocation is devised to achieve the required return from a long-term perspective. It basically involves in deciding how much of your assets should be in cash, how much in stocks, how much in bonds and how much in real estate etc., over your long-term time horizon. The tactical asset allocation on the other hand, is changing the assetclass weights (calculated by strategic asset allocation method) in response to predictions on short-term relative market performance of these asset classes.

2. 60/40 Method

One of the most common approaches to strategic asset allocation is the 60/40 method; 60% in stocks and 40% in bonds. This approach can serve at least as a starting point for an average retail investor. The 60% includes all the risky investments like stocks, interest in private business, angel investing, real estate etc.,. The balance 40% must include cash and bonds. This is one of the simplest methods for allocating your assets and most financial advisors would readily recommend this one for most of their clients. However this method suffers from 'one size fits all' problem. But this method can at least be a good starting point from where one can make adjustments as required.

3. 100 Minus Age Method

As per this method, if your age is 35, then 65% (100-35=65) must be allocated to stocks and 35% to cash and bonds. This method is better than the previous one as it does not suffer from the 'one size fits all' problem. It allows for variation in risk tolerance for investors in different age groups. This would imply that an investor who is in her 20s could be more aggressive than another in her 50s.
4. Making Adjustments

The two methods mentioned above are generally inexpensive and practical for most retail investors; however, it must be noted that they are only the starting points; some refinements are almost always required based on investor's time horizon and risk tolerance. For example, consider the case of an investor, aged 30; as per the 100 minus age method 70% can be invested in stocks. However, if he must make a down payment for his new home in 2 years, then based on his low time horizon, 70% in stocks may not be prudent.

On the other hand, consider the case of an investor in her early 30s, building a portfolio for her retirement. Based on the 100 minus age method, the allocation to stocks could be more than 65%. As the investment time horizon is more than 30 years, this allocation seems appropriate. However, if the investor does not like to suffer losses of more than 5%, she must consider reducing the exposure to stocks. This allocation may not suit the investor's risk appetite. Hence, adjustments must be made considering both the investment time horizon and the risk tolerance.

The following is a list of suggestions that can be used to fine-tune the basic asset allocation method.

- a. You must always keep some cash for special investment situations. This is a golden rule and failure to follow it may result in losing some rare opportunities.
- b. If your job is of a permanent nature, then it can be likened to cash flows from bonds. For example, if you are a teacher, then you can possibly never face a loss of job. Even when the overall economy is in recession, teachers get busier as more people tend to go back to school. So, your income is steady at all times which is similar to bonds; you can then increase your exposure to stocks. However, if your job is like equities in nature (i.e., if you are on commission basis, or work in cyclical industries facing frequent job-cuts) you require a steady stream of income and hence more exposure to bonds (less exposure to equities) may be appropriate.
- c. If you are a retiree and you depend on your portfolio to cover your living expenses, then you require more exposure to bonds and dividend paying utility stocks for your regular income. You may also consider investment in REITs as they are mandated to pay out more than 90% of their net income as distributions. A word of caution here is that as a retail investor, exposure to a single corporate bond can be extremely risky due to concentration risk.
- d. Always, have some exposure to stocks unless your time horizon is less than five years. This is because stocks have achieved highest returns over the long-term compared to bonds and other treasury securities in the past; stocks have also beaten inflation over a long period of time.

e. If you think you have even a slightest gambling instinct then set aside a fixed dollar amount to engage in such activities. The money could be used for playing black jack in a casino or for taking a speculative position in forex or futures trading or it could even be for buying an obscure penny stock based on a colleague's suggestion. The money should not be much more than about 1% of your portfolio and you must make a resolution not to ever exceed this allocation. This allocation is made only to appease your inborn appetite to gamble or to test your luck.

One last word on gambling; when you have the urge to test your luck, hit the slot machine or buy some lotto tickets; don't try it on the stock market. You would do yourself good if you had changed the password of your trading portal and forgotten it! By the time you receive the replacement password by mail, hopefully the tide has passed. You may be surprised that I have classified buying a stock based on a colleague's suggestion, as gambling. You had better believed it. I know, based on my experience in dealing with clients, colleagues and friends that most people use a large part of their assets for buying stocks based merely on tips from friends, relatives, colleagues and other similar social sources.

Remember, these sources are no better than you in stock picking except that they may have had some successes about which they would be happy to share with you; but just as all humans do, they would not be so forthcoming with their embarrassing failures. So, you will be following them knowing only *half the truth*. There is an exception to this rule of course, and that is, if you and a few of your friends, relatives or colleagues form an investment club to analyze potential investments before taking investment actions. At all other times, merely following someone's tips is tantamount to gambling and you must limit resources for such endeavors.

5. Tactical Asset Allocation

The asset class weightages thus optimized is from your long-term perspective. However, there will be times when you may like to change these weights based on your short-term view of the relative performance of various asset classes. As this book is being written, there are considerable headwinds for the equities markets on a global scale due to a number of factors viz.,

- □ Sustained unemployment, slow economic growth and fear of double dip recession in the US.
- □ Slow growth in the Euro zone combined with continued fiscal austerity programs
- □ Debt crisis in some Euro countries, impending default of Greece, fear of breaking up of Euro as a common currency
- □ Inflationary environment in Asia

Under these unusual circumstances, with most of the global equities markets in a bear market, an investor can reduce exposure to stocks and keep more cash in the portfolio on a short-term basis. Or one could also use hedging strategies using derivatives i.e. short-selling stock (or index) futures in such a way that any drop in the stock prices gets offset by the increase in value of short positions in the futures market. Such an adjustment to asset class weights based on shortterm outlook is known as tactical asset allocation. This method of exploiting short-term market pricing anomalies requires considerably high amount of market timing skills with enormous amount of time to watch the market and news. A regular salaried investor will neither have the required skills nor the time to carry out such an elaborate work.

When the investor decides to sell the equities, the market could be at the bottom and ready for a rebound. After selling, she could have gone on a business trip with little spare time to watch the market prices. By the time she is back, there could have been a serious rebound and she could have lost on a rare opportunity. So, while it is possible to make asset weights changes based on short-term outlook, a working class retail investor may not have the necessary skills and time required to exploit them. In countries where capital gains are taxed, frequent changes to the asset allocation will result in high tax payments. The trading costs also will increase when you enter in and out of your investments frequently.

6. Sample Asset Allocation

To help you in making your own asset allocation, the following table is presented as a typical 70/30 split; 70 for risky assets such as stocks, real estate, gold and private business and 30% for bonds, fixed deposits and cash. Notice that there is a 1% allocation for the speculation activities.

Sr No	Asset Type	Objectives	Allocation in % of assets
1	Stocks	Growth	35.00%
2	Real estate (second home onwards)	Hedge against inflation, For Rental Income	20.00%
3	Commodities	Hedge against inflation & stock port- folio	10.00%
4	Gold	Hedge against high inflation, wars & other large scale global crises	2.00%
5	Angel Investing	Possibility of high growth, Satisfaction of helping someone, can lose full capital	2.00%
6	Speculation, Gambling	Possibility of high returns, can lose full capital	1.00%
7	Corporate Bonds	Fixed returns, affected by inflation	20.00%
8	Fixed Deposits, Risk- free Government bonds	Fixed returns, affected by inflation	5.00%
9	Cash for special situa- tions	Very Low Fixed returns, affected by inflation	5.00%

Table 15.1	Sample Asset allocation
	Sumple ASSeculocution

The above table is only a typical allocation for a 70/30 split. You must work on your own allocation to suit to your age, employment, return objectives and risk tolerance.

You may seek the counsel of an independent financial advisor to arrive at an optimal allocation for you. In the next chapter, we will move on to the next task, which is to select an appropriate investment methodology for each of your asset classes. By doing so, actually we are going to answer two questions, who? and how?; who will actually carry out the task of investing? and how it will be carried out?

To Summarize...

- 1. A well defined asset allocation plan avoids over-concentration of your assets in a single asset class.
- 2. You may start with a simple strategic asset allocation method described in this chapter such as '60/40' or '100 minus age' method and then make suitable adjustments based on your age, nature of job, return objectives and risk-tolerance.
- 3. Allow a maximum of 1% for speculation and other gambling instincts and resolve never to exceed this limit. You will save yourself many a sleepless night.
- 4. Always, have exposure to stocks unless your time horizon is less than five years.
- 5. Tactical asset allocation is a method by which the asset weightages are altered based on short-term market expectations. This requires market timing skills and adequate time for proper execution, which may not be expected from working people.
- 6. It would be a good idea to stop here and begin work on a spreadsheet for your own asset allocation. Regardless of how much money you have for investment, asset allocation must be done to avoid concentration of risk to a single asset class.

16. Investing Methods

(Who? & How?)

If you do not have the time, inclination or the willingness, then no amount of skills can ensure you success in any calling, let alone in investment.

1. Investment Process

By now, I hope you are prepared to accept that doing research is an inherent part of investing; any investing activity carried out without proper analysis is tantamount to speculation. Trading based on tips from friends, colleagues and other *ought-to-know-better* sources such as financial media, brokers etc., do not qualify as investing. We also know that the research allows us to distill the highest quality companies or investments from hundreds of thousands out there in the market. The end-product of the research is therefore the 'wait-list' of prospective investments. In most cases, when you finish doing research on an investment product and found it to be of good quality, the price may not be to your liking. This means you must be prepared to wait for long periods of time. While waiting, we must continue to evaluate the wait-list even more closely and update it on a continuous basis.

This *waiting business*, however is easier said than done! It can be very frustrating for most retail investors. Professional fund managers operating out of preset rules may not necessarily suffer as much due to this problem. The *waiting* truly requires a great deal of discipline and it happens to be the most crucial requirement for long-term investment success. We may develop the discipline to wait, by renewing the hope that the market will eventually present us with a right opportunity. When such a moment arrives, it is usually when the whole market is very pessimistic about the future. To buy when every one else is selling is a great challenge for a retail investor. What we normally think in those difficult times is, *what if the majority knows something we don't know?* So, unless our research is sound, it is very hard to stand against the crowd.

What do you do next after buying? Start all over again and continue to update your wait-list, paying particular attention to the investments that you already own. This is also a great time to evaluate your past decisions and to correct mistakes. And finally when do you sell? You must obviously sell when your investment objective is accomplished (or at the end of your investment time horizon). And you must also sell when the market becomes too optimistic and the prices are very high compared to the earnings potential of the asset. As you can appreciate, the whole process of investing on your own involves rigorous and disciplined effort.

2. The Answer to the question 'Who'

Performing all of the activities in the previous section requires skills, time and most importantly the inclination and willingness to expend the effort required. If you possess them all, then you may carry out the whole process by yourself. If not, you must seriously consider enlisting the services of a specialist. Regardless of who manages, whether you or the specialist (fund manager), the process and the effort required are still the same. They are quite elaborate and time consuming. If you are engaging a fund manager, then you must be prepared to pay adequate compensation for the services. Remember, if you offer peanuts, you can only get the monkeys!

For the benefit of people who cannot spend their own time and effort on investing, a brief list of criteria has been put together consisting of things to look for in a fund manager before signing-up with them.

- a. Who are the people behind the fund? What are their qualifications? How long have they been with the fund? The irony of the fund management industry is that both very good and very bad managers don't stay for too long. The turnover rate in this industry is rather high. This is critical when you evaluate the past performance of the fund.
- b. What is the historical performance? Is the performance consistent or erratic? Are the people who achieved the past performance still with the fund?
- c. What is the investment philosophy? What is the area, sector of specialization?
- d. What is the investing method to be used? Active, Passive or semi-active investing methods. (we will cover them in the following sections). Fees will greatly vary according to the investing method.
- e. What is the *edge* of the fund over the others? What are the research capabilities? Internal or external paid or external free research.
- f. How does the fund manage its risks? Do they have a written policy for controlling risks? Who will manage the risk and what are his/her qualifications and track record?
- g. Will there be any foreign exchange risks involved? Does the fund have any strategy to hedge this risk away?
- h. Finally the fees. What are the proposed fee structure and the billing schedule? The fee could be negotiated on an annual basis while the billing could be made (one-fourth) quarterly. In almost all cases, there will be fixed fees based on the Assets Under Management (AUM) and performance-based fees against a pre-determined benchmark.
- i. A *high water mark provision* on the performance-based fees is a desired feature to have. Let us say, in 2007 the fund manager outperformed the index and collected the performance-based fees and in 2008 the fund

had underperformed and could not collect the performance-based fees (of course the fixed fees are always payable). So, in 2009 the fund must out perform the index more than the 2008 underperformance to collect the performance-based fees, thus a cumulative outperformance is mandated.

The list covers only the basic requirements to evaluate a fund and is only the tip of the iceberg. The big insurance companies and mutual funds generally use far more number of criteria than listed above to select managers for their funds. But, the real problem retail investors will face is, with regards to the size of the investments. If the investment size is small (less than a million) then most fund managers may not be interested in their accounts; then getting detailed information (about the manager) may prove to be very difficult. Without such information, proper evaluation also becomes quite difficult.

But before you make this decision, read this entire book at least once. The investment process for stocks & bonds has been thoroughly explained here with a sincere intention to make investing simpler and safer for ordinary working class retail investors. The major reason most people are hesitant and even fearful about the investments is their lack of skills and experience. The skills can be certainly learnt by reading this book and/or some other similar books (some of them are listed in bibliography at the end of this book). The key to success is to keep our failures small and the successes big with an ability to learn continuously.

Many salaried retail investors have very little time to spare for properly analyzing their investments. The foregoing sentence has been deliberately written in several places and contexts all over this book, because it is simply true. Many a time, serious analysis happens only during coffee break discussions with colleagues. Ability to spend time, inclination and willingness to do the work depend entirely on you and your circumstances. These qualities are far more important than the skills; because if you have them, skills can be easily developed. The reverse is not true. If you do not have the time, inclination or the willingness, then no amount of skills can ensure you success in any calling, let alone in investment. Then you would be better off to leave your portfolio in the able hands of a professional fund manager.

This decision, however, must be made for each asset class in your assetallocation. For example, you may have a natural flair for investing in real estate while your spouse might be good at investing in risk-free government bonds; so, you might be confident of managing these assets within the family; you might need the help of outside managers only for the other asset classes.

A typical answer sheet is provided below with a filled-in answer for a better understanding. Fill-in your answers in the empty space provided in the table based on your own circumstances, skills, availability of time, inclination and willingness to do the required work.

Sr No	Asset Classes	Who? (Example)	Who? Your answers
1	Stocks	Fund Manager	
2	Real Estate	Myself	
3	Commodities	Fund Manager	
4	Gold	My Spouse	
5	Private Business	Myself	
6	Gambling, Highly speculative investments	Myself	
7	Corporate Bonds	Fund Manager	
8	Fixed deposits, Risk-free bonds	My Spouse	
9	Cash, Savings accounts	Myself	

Table 16.1 The answer to the question 'who'

By making this decision, you are forced to recognize the areas of your strength to make better use of them; while at the same time identify the areas of your weaknesses and find ways to augment them.

3. Investment Approach

There are basically three investment approaches, which are commonly employed by investors. They are active investing, passive investing and semiactive investing methods. Active investing is the conventional way of investing in individual securities; passive investing means investing in the overall market *index*; and semi-active investing means investing in a subset of individual securities from the full-list of securities in the market index while keeping the risk closer to that of the market index; so it lies somewhere between these two. We will examine them detail before in finalizing on any one method for a particular asset-class. This exercise must be carried out even if you are going to use a fund manager.

For example, you have decided to use a fund manager for *corporate bonds* and you would like them to manage it by *passive investing* method. Then you only look for fund managers who specialize in *passive investing in corporate bonds* before zeroing-in on a particular manager. Understanding the various investing methods will help us find the answer to the question 'how?' for the asset classes we are interested in.

4. Active Investing

Active investing involves all the steps described in the investment process earlier. Active investors believe that it is possible to consistently identify better performing investments to achieve better than the overall market performance. In this investment approach, an investor or the investment fund manager will analyze the stocks, bonds or commodities etc., individually. For example, for investing in US stocks, hundreds of listed companies like General Electric (GE), Boeing (BA), Coca-Cola (KO) etc., must be analyzed and a wait-list of companies must be prepared before waiting for the right moment to execute the trade.

By investing in individual companies, one is exposed to specific company risk in addition to market risk. If the company in which you had purchased stock is in trouble, its shares will perform badly and you will suffer huge losses; worse still, if the company goes bankrupt, your shares may not be worth anything. On the other hand, if the company performs exceptionally well, like Apple (AAPL) after 2005, then the returns could be phenomenal. Always remember, the stock must perform within *your* time horizon. For example, if an investor had bought Apple shares (AAPL) at USD10 in 1993 and kept it for 10 years till 2003 (10 year time horizon) she would not have gotten any appreciable returns. However, in the next 8 years (from 2003 to 2011) she would have made nearly 4000% returns!

Obviously, this method of investing requires heavy workload and time commitment since you need to analyze many individual securities. Similarly, if a fund management company is managing your portfolio based on active investment strategy, it has more work to do to analyze many securities; it must demonstrate both good research and good trade execution skills. For this reason, active investing fund managers will charge higher fees.

There are several disadvantages in following an active investing method:

- a. If you are managing it yourself, then you must possess good skills, ability and inclination to spend quality time on research on several prospective securities. If you are engaging a fund manager to manage your assets, then they will charge higher fees for the same reasons.
- b. The portfolio risk is higher because it now includes the market risk and individual company risk.
- c. Active investing may result in less than optimal diversification.

In spite of these disadvantages, people still follow active investing method because of their superior ability or the hope thereof to outperform the market index. However, the efficient market hypothesis (EMH) argues that an *average investor* cannot hope to consistently outperform the market by engaging in active investing after taking into account the additional risk and management costs. This is in direct conflict with one of the objectives of this book, which is 'by following the ideas presented in this book, a regular working class retail investor must be able to earn above-average investment returns without losing any sleep.'

This obvious contradiction can be very easily explained. The research studies, in general, do not differentiate between investing and speculating in financial markets; therefore the track records of the *average investors* (used in such researches) will inadvertently include track records of *speculators also* because *the intents of investment actions are hard to capture*. Based on my own experience in dealing with clients, colleagues and friends, speculative transactions far outnumber the genuine investment transactions done with thorough analysis and with a margin for safety. My aim through this book is to influence the readers to become genuine investment results.

5. Passive Investing

Passive investing involves most of the steps described in the investment process; the primary difference being, instead of investing in individual stocks, you invest in the stock index (taking a position in all the stocks in the index, in the same proportion). Passive investors operate from a belief that it is *not consistently possible* to identify good investments that will outperform the market after taking into consideration the *costs for such efforts*. So, they simply duplicate the applicable market index instead of figuring out relative merits between various individual stocks.

For example, Dow Jones Industrial Average is a stock index consisting of 30 US industrial stocks; S&P 500 is a stock index of 500 US Stocks; NASDAQ Composite is stock index of 2000 US technology stocks. If you are a passive investor, who has no inclination, time or skills required to evaluate individual stocks or if you are uncomfortable with the risks involved in investing in individual stocks, you may simply get exposure to the stock index by investing in all the stocks in the index. Your return on investment in this case will be very close to the overall market return, save the transaction costs. This method is known as passive investing, which prides in *inherent diversification*. This means there is no specific company risk; a single company's bad performance will not adversely affect the overall performance. However, market risk will always be present.

The most common passive investment options for the retail investors are index mutual funds and Exchange Traded Funds (ETFs). Both are designed to track the performance of underlying indices. There are many differences between them; the most obvious being the ability of ETF shareholders to buy or sell shares in stock exchanges during market hours. On the other hand, the shareholders of index mutual funds usually transact directly with the funds based on the Net Asset Value (NAV) determined at the market close. But, don't get *index mutual funds* mixed with *conventional mutual funds*. Conventional mutual funds generally employ active investing strategies and charge higher management fees; they also charge a fee for buying (sales charge or front-load) or for selling a fund (deferred sales charge or back-load). But index mutual funds employ only passive investing strategies; this means management fees can be quite low; and most are no-load funds.

A table of comparison between Conventional Mutual funds, Index Mutual Funds and ETFs is provided below:

Sr No	Feature	Conventional Mutual Funds	Index Mutual Funds	ETFs
1	Investment Strategy	Active Investment	Passive Invest- ment	Passive Investment
2	Diversification	Depends on the active manage- ment strategy	Yes	Yes

 Table 16.2
 Comparison between Mutual funds and ETFs

3	Minimum In- vestment size	Yes.	Yes.	No. Can buy even a single ETF share
4	Transaction costs	Sales charge apply 2–5%	No for no-load funds. May have a penalty for selling before a minimum holding period	Brokerage charges
5	Management Costs	High, typically in the order of 1–2%	Low	Low
6	Continuous availability of pricing	No. Price available once a day at the market close.	No. Price available once a day at the market close.	Yes
7	Ability to trade during market hours	No	No	Yes
8	Dividends	Reinvested in the funds	Reinvested in the funds	Total return type ETF will reinvest the divi- dends. Price return type ETF will dis- tribute the dividends regularly.
9	Ability to short	No	No	Yes
10	Taxes (where capital gains are taxed)	Frequent tax- events when other investors redeem their shares	Frequent tax- events when other investors redeem their shares	Tax-Efficient

6. Semi-Active Investing

Semi-active investing involves a combination of both passive and active investment methods. In semi-active investing, you first take a particular market index, for example, Dow Jones Industrial Average (DJIA). There are 30 component stocks in DJIA and all of them are large-cap US companies. A semi-active investor would select a sub-set of stocks, say 14 among the 30, to construct a portfolio in such a way that the portfolio risk still stays close to the market risk; and the selected stocks are superior to the rest. The portfolio thus constructed is expected to outperform the market index DJIA.

In other words, the aim of the semi-active investor is to outperform the market while keeping the risk closer to the market index, with lower number of stocks. As this strategy requires high skills, management costs will be higher than that of passive investing. We will summarize the differences between active, passive and semi-active investing methods in a comparison table provided below:

Sr No	Feature	Active Investing	Semi-active Investing	Passive Investing (ETFs)
1	Investor Objective	To earn more than the market return	To earn more than the market return	To earn only the market return
2	Management costs	Higher	Higher	Lower
3	Risks	Market Risk and Specific Company Risk	Aims to achieve close to market risk. In reali- ty it may be in between active and passive	Only Market Risk
4	Diversification	Cannot be concluded	More	More

 Table 16.3
 Comparison of investing methods

At this point you must be aware that market risk cannot be avoided or diversified away. It will always be there so long as you are exposed to the market. The best you can hope to achieve is to have your portfolio risk close to the market risk.

7. The Answer to the question 'How?'

Armed with the knowledge on various investing methods, we shall now answer the question 'how?' This means you must decide on an appropriate investing method for each one of the asset classes in your asset allocation table. The table below provides typical choices for each of the asset classes, to help you with this task. The table also provides an example answer for each asset class. Take some time off to think about it seriously and then answer.

Sr No	Asset Classes	How? (Example)	How? (Your an- swers)
1	Stocks	Index Mutual Funds	
2	Real Estate	Direct home investment	
3	Commodities	Commodity ETFs	
4	Gold	Bullion & Jewelry	
5	Private Business	Angel Investing	
6	Gambling, Highly specu- lative investments	IPOs, Lottery tickets	
7	Corporate Bonds	A-rated Corporate bonds index ETFs	
8	Fixed deposits, Risk-Free Government bonds	Direct investment in Government bonds	
9	Cash, Savings accounts	Savings account	

Table 16.4	The answer to the question 'how'
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Doing this exercise will allow you to pay particular attention to the diversification, performance (past) etc., against costs in each type of investing method and to make informed decisions.

8. More on ETFs

ETFs provide an efficient means of getting exposure to many asset classes not possible ten years ago such as gold, commodities, corporate bonds, government bonds, foreign bonds, foreign equities etc., For example, with the availability of Gold ETFs, investors can now access Gold investments without having to handle physical gold. Obviously, handling physical gold involves additional costs for safe storage. Even though the Gold ETF issuers also must hold bullion gold as collateral, the costs of storage and security will be shared among all the investors resulting in cost-efficiency. One word of caution here is due. The investor must be reasonably sure that the ETF issuer has 100% physical gold is regularly verified by independent auditors and that it is kept in high-security vaults. Additionally, the physical gold must be bankruptcy-remote from the ETF issuer, the custodian bank and other participants i.e. the bankruptcy of any of these parties should not affect the physical gold in any way and the issued shares should remain fully collateralized.

As of now, foreigners are not allowed to trade in China-A shares, which are stocks of companies incorporated in Mainland China and are traded in Shanghai and Shenzhen markets. This market is only open to the mainlanders and some selected international institutional investors. However, by using an ETF that replicates the performance of China market's CSI300 index, foreign investors also can get the required exposure to these shares.

With Sector ETFs, it is possible to get focused exposure to a particular sector, while ignoring the rest. For example, there are nine (9) sector index funds that divide the 500 stocks in the S&P 500 index. The performance of the nine (9) sectors index ETFs together represents S&P 500 as a whole. The nine sector ETFs are listed below:

The Consumer Discretionary Select Sector SPDR[®] Fund - XLY The Consumer Staples Select Sector SPDR[®] Fund - XLP The Energy Select Sector SPDR[®] Fund - XLE The Financial Select Sector SPDR[®] Fund - XLF The Health Care Select Sector SPDR[®] Fund - XLV The Industrial Select Sector SPDR[®] Fund - XLI The Materials Select Sector SPDR[®] Fund - XLB The Technology Select Sector SPDR[®] Fund - XLK The Utilities Select Sector SPDR[®] Fund - XLU

[&]quot;SPDR" is a registered trademark of Standard & Poor's Financial Services LLC ("S&P")

Suppose, an investor has a positive view of only one sector during her investment time horizon, say Financial, then she may get a focused exposure by investing in the Financial Select Sector SPDR[®] Fund – XLF, instead of the broad market index S&P 500. Similarly, in a recessionary environment, an investor may take a positive view on defensive stocks such as utilities. While she may be positive on the utilities sector as a whole, she may not be sure on which particular stock/s to invest in. This requires more work to research on all the utilities companies. Even if she did research and invested in a few utility stocks, what if those stocks she had purchased underperformed, while the rest did well? So, instead of investing in a few companies, she might opt to invest in the Utilities Select Sector SPDR Fund – XLU.

With these Sector ETFs, an enterprising investor can devise a strategy to overweight outperforming sectors and underweight underperforming sectors, thus invest like a hedge fund manager. What was once feasible only to sophisticated hedge funds is now possible to ordinary retail investors. For example, in a recessionary environment, one could buy defensive sectors like Consumer Staples Select Sector SPDR[®] Fund – 'XLP' and Utilities Select Sector SPDR[®] Fund – 'XLU'. An investor could, at the same time, 'short' ETFs like Consumer Discretionary Select Sector SPDR[®] Fund – 'XLY' and Financial Select Sector SPDR[®] Fund – 'XLY' and Financial Select Sector SPDR[®] Fund – 'XLF'. A well-constructed portfolio with long and short equity positions, removes market risk. Such a strategy is called 'equity market neutral', which is typically executed by hedge funds. With the sector ETFs and reasonably good judgment on overall market conditions, an enterprising investor can execute such a strategy with relative ease.

Before leaving this chapter, we will discuss another type of ETF that might be used in down trending markets. These are called 'short ETFs'. 'Shorting' means selling the shares that you do not own. In almost all countries, stock exchanges disallow shorting of shares. She has to first borrow the shares from a broker and then sell them in anticipation of a downward market correction. This involves an additional step of borrowing and associated costs. Now, with the availability of the 'short ETFs' she could buy the 'short ETF' shares similar to buying any other shares or ETF. When the underlying index, say S&P500, decreases in value, the price of the 'short ETF' will increase. Conversely, when the S&P500 increases, the value of the 'short ETF' will fall. In this case, since the investor is 'buying' the 'short ETF', the shorting rules of the stock exchanges are not violated. Hence, for all practical purposes, buying the 'short ETF' is equivalent to shorting the index.

As you may have noticed, some of the above are advanced strategies, which require market-timing skills. Working people may not have the required skills or the time to execute such strategies by themselves. However this has been included to empower the readers to evaluate their fund managers who may be using such advanced strategies.

To Summarize...

- 1. Investment process outlined at the beginning of this chapter is applicable for everyone who undertakes the task of investing. The task could indeed be daunting, especially for working people.
- 2. Before you decide to carry out investing on your own, evaluate whether you possess the qualities listed below:
 - a. Possess adequate time to do research on investment products
 - b. Curious to learn and to develop skills
 - c. Have willingness and inclination to spend long hours doing research
 - d. Able to accept mistakes early and exit unsound investments
- 3. When you decide to engage a fund manager to manage your assets, you must evaluate them on past performance, people running the fund, risk management and fee structure.
- 4. There are three basic investing methods, viz active, passive and semi-active investing which may be used to manage individual asset classes.
- 5. Index Mutual Funds and ETFs offers the most cost effective and convenient method of passive investing.
- 6. ETFs provide an efficient means of getting exposure to many asset classes not possible ten years ago such as gold, commodities, corporate bonds, government bonds, foreign bonds, foreign equities etc.,
- 7. Sector ETFs allow investors to get exposure to specific sectors. They also allow investors to construct a "market neutral" portfolio by overweighting outperforming sectors and underweighting underperforming sectors.
- 8. 'Short EFTs' allow investors to short the stock index without flouting the exchange rules that ban short selling of securities.

17. Investing Ethics

(The First Principle)

In law a man is guilty when he violates the rights of others. In ethics he is guilty if he only thinks of doing so

Immanuel Kant

1. Safety in Investment

More than ten years ago I had bought a book titled 'Ethics in Engineering'¹ out of shear curiosity because, up until then, I had no idea of how ethics and engineering were related. I had always thought ethics was just a way of living, not something you must read in a book, which is certainly very different from engineering. At which point these two diverse subjects would converge was of big interest to me. Then while reading it, I realized that the major focus of the book was on safety. The engineers and their managers who design and operate engineering systems are responsible for the safety of people (and property) who come into contact with these systems. This responsibility is over and above satisfying the minimum requirements set by law and that is why it is called ethical, not legal. The main lesson I learnt from this book is that those who understand the concept of safety and act accordingly are able to sleep at night well and those who fail in this responsibility must live a life full of nightmares even if they escape legal penalties.

The concepts discussed in the preceding paragraph are very much applicable to retail investing and that is why it has found its way into this book. As investors we are responsible for the safety of our investment portfolios to ensure the economic wellbeing of the people who depend on it. It is generally thought that, this applies to only fund managers who handle other people's money. But in reality, if your decisions will affect people in your own family, then you are also a fund manager, except that no one pays you a management fee and no one holds you accountable for your actions. Regardless of your motive for investing, be it your children's education or your home or the comfortable retirement of your spouse and yourself, the decisions that you make with your investment portfolio have profound effect on the quality of life you will live. Unlike in engineered systems, if you invested your portfolio rashly and lost (most of) it, there is no law that will punish you. When you incorporate an attitude of safety into your investing methods, your portfolio, economic and emotional wellbeing of your dependants and yourself will never be in danger. You will never have to suffer sleepless nights on your investments. As a retail investor you owe this sense of peace to yourself.

And what is the best way to invest safely? There are only four things you must remember to do. 1) Be very choosy about your investments, 2) Pay less for them and 3) Avoid leverage (debt) to buy them 4) Have a diversified portfolio. Each one of them has been discussed in earlier chapters, so we will not go through them again here. These concepts are relatively simple; but the use of the big name like 'ethics', is to put the 'Fear of God' in you!

2. Insider Information

From time to time you will watch decent looking people getting paraded across your television screens for using insider information for trading. If you have ever wondered what insider trading is, then the following extract from the US Securities and Exchange Commission (SEC) website² should provide the necessary enlightenment on the subject.

Illegal insider trading refers generally to buying or selling a security, in breach of a fiduciary duty or other relationship of trust and confidence, while in possession of material, nonpublic information about the security. Insider trading violations may also include 'tipping' such information, securities trading by the person 'tipped,' and securities trading by those who misappropriate such information.

If the above definition is not clear enough, the SEC's website further provides guidance on who could be liable for enforcement actions against insider trading legislation.

The SEC regularly brings insider trading enforcement actions against:

- □ Corporate officers, directors, and employees who traded the corp ration's securities after learning of significant, confidential corporate developments.
- □ Friends, business associates, family members, and other 'tippees' of such officers, directors, and employees, who traded the securities after receiving such information.
- Other persons who misappropriated, and took advantage of, confidential information from their employers.

The first question we must answer is 'what is material, non public information?' *Material* information is any information that, if disclosed, will have an impact on the prevailing price of a security (stock). *Nonpublic* information includes any information that is not yet disclosed to the general public and/or mainstream financial media. By combining the two foregoing sentences we can define material, non-public information as 'any price sensitive information, which has not been disclosed to general public yet'.

Typically, a listed company must file information with the exchange in a proper format, which is then recognized as public information. Any information revealed to a select group of investors or analysts are not considered public information. The reliability of the source of information is also very important. For example, factual information about a product that is disclosed by a company

executive is considered material (inside information), whereas speculation by a competitor over the same product is not considered material.

If an analyst uses information from a company's clients, suppliers, competitors, or any other sources and (not from company insiders) draws conclusions about the company's prospects, and then takes investment actions then such actions are not violations. This is how research reports can bring true value by uncovering hidden gems or by warning of impending danger at a company.

When information is both material and nonpublic, then the holder of such information must not act on it. Even if the person ends up with a financial loss, acting on such information is a violation because of his/her intention to profit from the transaction. Further, the holder of the information must not cause others to act on such information. So, passing the information on to your best friend or your favorite uncle is a violation, even if you do so unknowingly and even though the legal system may not be able to discover such a violation until your friend or uncle acts on such information. Then, both parties may become subject to legal sanctions. In any case, the actual act of disclosing the information is considered an ethical violation whether or not any action is taken on the information.

The desire to make some quick bucks coupled with some hope that a single transaction will not get noticed among the millions of transactions everyday, can block rational judgment. Thinking in this way is seriously flawed, as the computer systems used today are highly sophisticated, capable of recognizing questionable trading patterns and relationships in a matter of seconds. In any case, financial gain from such a transaction can never be equal to the loss of face, loss of honor, loss of reputation, and even loss of liberty that might follow. Moreover, prolonged legal struggles may certainly lead to many sleepless nights and unhappiness. A single such act may derail one's financial goals and security, rendering the achievement of long-term investing objectives impossible.

The next question is 'why is this topic in this book?' The main purpose of this book is to help working class retail investors to achieve their investment goals without losing sleep. It is not enough to know what you must do to realize your goals safely; it is also worthwhile to learn what we *must not* do. Using insider information to trade is one such item in the 'must not do' list which is the reason why this topic had to be included. As a retail investor you may not be a company insider yourself; but you could be socially involved with a company insider and thus come across price sensitive information of a public listed company. And if you are in possession of such information, just be sure to remember this topic in this book!

To Summarize...

1. As investors we are responsible for the safety of the investment portfolio to ensure the economic wellbeing of the people who depend on it.

- 2. If you invested your portfolio without adequate safety measures and lost (most of) it, there is no law that will punish you. And that is why this is an ethical responsibility.
- 3. When information is both material and nonpublic, then the holder of such information must not act on it. Even if the person ends up with a financial loss, acting on such information is a violation because of the intention to profit.
- The computer systems used today are highly sophisticated, capable of recognizing questionable trading patterns and relationships in a matter of seconds.

18. Developing Your Own Edge (On Your Own)

The winner's edge is not in a gifted birth, a high IQ, or in talent. The winner's edge is all in the attitude, not aptitude. Attitude is the criterion for success

Denis Waitley

1. What is Your Edge?

First of all, we must realize the stock market does not owe us a living. If we expect positive returns then we must develop an edge over the other market participants. After all the stock investing is known as 'zero-sum game'; for every trade, there must be a buyer and a seller. It also means, for every winner there must be a loser. So, we must have a competitive edge to enable us to outsmart people who take our opposite positions. For that, we must know who they are, what their strengths and weaknesses are before we can prepare ourselves to counter them.

Study each one of the categories of investors listed below carefully, especially the strengths to understand how indomitable the competition really is.

a. Fellow Working Class Retail Investors

These are people like you who work full-time in an office or a factory during most of the market-hours. In short, the weekend investors.

Strengths:	As working people, most of them are not probably dependant
	on the returns from investments to maintain their current
	standard of living. So, the time horizon can be long.
Weaknesses:	Lack of skills, lack of time and lack of inclination to do
	research, Limited funds
	Higher brokerage rates due to low trading volume and
	absence of relationship with brokers
	Arbitrary decision-making (absence of well defined system
	to make decisions) and weak risk management

b. Independent Professional Traders

Strengths:	They have time to monitor the market during market-hours.
-	They have trading skills depending on their experience
	Higher computer power with multiple screens
	Lower brokerage rates due to higher trading volume and
	good relationship with brokers
Weaknesses:	Depend on trading income to meet living expenses. So,
	Short-term focus

Limited funds

Arbitrary decision-making (absence of well defined system to make decisions) and weak risk management

c. Professional Traders and Dealers who work for Stock Broking Houses, Banks and Other Financial Institutions

Strengths:	They have time to monitor the market. They also have trading
	skills depending on their experience.
	Higher computer power with multiple screens
	They also have access to high amounts of capital; they also
	have the support of the organization
	They get fixed salaries, so not dependant on trading income
	for living.
	Lower brokerage rates due to higher trading volume and good $% \mathcal{A}_{\mathcal{A}}$
	relationship with brokers
	Their own money is not at risk, they can be far more rational
	Presence of supervisors and strong risk management
Weaknesses:	They get variable bonuses that depend on trading income. Their job security is also dependant on short-term results. So, short-term focus

d. Fund Managers, Pension Funds, Insurance Funds, Hedge Funds, Mutual Funds etc.

Strengths: They have time to monitor the market and to do required research. They can afford to have in-house research staff.

High computer power with sophisticated proprietary systems

They can afford to have highly skilled dedicated traders

They have access to huge amounts of capital

They get fixed salaries, so not dependant on trading income for living.

Lower brokerage rates due to higher trading volume and good relationship with brokers

Their own money is not at risk, they can be far more rational

Presence of supervisory hierarchy and strong risk management

Weaknesses: They get variable bonuses that depend on investment results. Their job security is also dependant on short-term results. So, short-term focus

e. Fund Managers that Focus on Long-term Performance and Sovereign Wealth Funds

Strengths:They have time to monitor the market and to do required
research. They can afford to have in-house research staff.
They can afford to have highly skilled dedicated traders
High computer power with sophisticated proprietary systems

They have access to huge amounts of capital

They get salaries and bonuses, not closely tied down to short-term performance. So, their focus is on long-term performance.

Lower brokerage rates due to higher trading volume and good relationship with brokers

Their own money is not at risk, they can be far more rational

Presence of supervisory hierarchy and strong risk management

Weaknesses: NIL

f. Investment	Robots (computer based auto-trading systems):
Strengths:	High computer power with sophisticated proprietary
	systems
	Works 24 hours a day
	Executions purely based on preset algorithms; therefore no
	emotions
	Lower brokerage rates due to higher trading volume and
	good relationship (owners of the systems) with brokers
	Automatic (programmed) risk management
Weaknesses:	Owners of these robots depend on trading income to meet
	living expenses. So, Short-term focus

By now, you are beginning to understand the kind of competition you are facing in the market. It is really tough indeed. In the light of this, you must ask yourself these questions: What is your edge? Is it superior to those millions of people like you? Is it superior to those millions of traders and professionals? Knowing very well, someone must lose money for you to make, who do you think is going to be charitable? What chance do you have to survive in this game? Not much, unless you develop your own edge and a system for yourself.

2. Set Your Own Rules to Follow

To survive in the market, knowledge found in books on investing (including this one) is not enough. It is only the first step. You must develop your own set of rules; the rules you will *respect and follow* without exception. We are habitually accustomed to follow other people's rules much more readily than our own. Following our own rules requires a heavy dose of willpower and discipline. Majority of the people who lose money in the market, do so, not because they are not intelligent.

The losers do not know that trading is intellectually fairly simple. It is less demanding than taking out an appendix, building a bridge, or trying a case in court.

Dr. Alexander Elder *Author, Trading for a Living*¹ Most people lose money because either they don't have their own set of rules or they fail to follow them without exception. If you analyze some of the past industrial disasters (such as the Bhopal gas tragedy or other nuclear disasters), ignoring safety rules have always been the major cause for every one of them. Not having adequate safety regulations is never the problem; not abiding by them has always been!

I suspect, being intelligent might make a person overconfident in his/her own ability, which can be only be a curse in the field of investing. When clouded by overconfidence, we tend to ignore rules; catastrophe will not be too far away. Stock market is the best teacher of humility, but its lessons also come with steep price tags, which are not unlike most industrial disasters. After every major industrial accident, there will be a lot to learn from; but such lessons are always very expensive in the first place.

a. Rule-1: Short-term Focus is Not for You

A quick look at your competition will reveal the fact that majority of the market participants have short-term focus. The market is over crowded with individual traders, proprietary traders working for banks, broking companies etc., and fund managers who *must perform* in the short-term. For many of them, their job security is dependant on their ability to produce short-term results. All of their intelligence, techniques and enormous amount of computer power are directed to uncovering investment opportunities with the sole objective of making short-term investment returns. We had already seen earlier, that the presence of so many professional investors and money managers scouring the markets with microscopes for short-term opportunities makes the market very efficient in the short-term.

As a working class retail investor, it is not easy for you to survive in this crowd. The beginners may get to win a couple of times initially. It may be the 'beginner's luck' in the works. But, once hooked on, most speculators will promptly give back everything gained and so much more to the market eventually. That's why I always consider people who get burnt by the market the first time, as lucky because they are least likely to try again. Once bitten, twice shy! Unlucky are those who get rewarded by the market first time; they will never ever really quit trying and in the process they might stand to lose a lot more.

You would have realized by now whom you are competing against, if you are a speculator seeking short-term gains. It is impossible to beat consistently the millions of professionals and traders, who can afford to watch the markets throughout the trading hours, with superior techniques and computer power. If you are a working class retail investor, you cannot afford to be a speculator. Period.

Moreover, people with short-term focus tend to become fantastic targets for scams. While I was editing the manuscript of this book, I received a cold call from someone claiming to be calling from the US about my 'non-performing' US shares. The caller must have been awake at 2am in the morning in US to catch me after lunch in Singapore! After some good entertainment (such callers talk extremely well) I politely said Goodbye. This was not the first time I received such calls; nor is this going to be the last.

For, most of the scams begin with a promise of great returns on your investment. The tragedy however is, while you are after the promised great returns, the scammers are only interested in your *capital*; their objective will *always* get accomplished first! And the capital will almost always be more than the returns promised!

b. Rule-2: There is a Good Chance if You have Long-term Focus

On the other hand, the sovereign wealth funds and a few value based fund managers tend to focus on long-term investment results, without overly worrying about short-term performance. This is usually made possible by linking their compensation structure to long-term results rather than short-term. In addition, they tend to focus more on the investment process, soundness of rationale for making investments decisions than the results themselves for evaluating investment managers. This area is least crowded; this is so because it demands great patience and provides least excitement for most people aspiring to make their living in the markets.

After all, everyone wants to invest in stocks that doubled up in a week. Would it not be great to share such exciting news in a party? Making others envious along way! But, investing in sound and boring companies with longterm outlook is seldom exciting and most of the crowd don't like it. This may be your opportunity. In fact, this is the only opportunity for working class retail investors.

c. Rule-3: The Company Must Deserve to be Your Wait-list

If you have decided to invest for the long-term you cannot afford to invest in weak companies. This is the single greatest benefit of deciding to invest for the long-term. Day traders are known to make several trades within the day without really having to bother about the quality of the company. After all, by the end of the day, they would square their positions. It may be their edge; not yours. If you are going to be invested for many years, you must naturally seek to invest only in sound companies with strong fundamentals and track records. Set your conditions and let only the deserving companies to be in your wait-list. After all, there are over 45,000 listed companies all over the world to choose from and all you need is about 20 companies that meet your criteria. So, why should you lower your conditions for the companies' sake?

Many IPO companies may not have stood the test of time, especially during the recession years. As per the recent statement² made by China Securities Regulatory Commission, 'roughly 94.7 percent of new-share speculators made a loss'. What makes you think you can be in the 5.3% category that profited? There are always exceptions. Agreed, once in a while, you might come across some great IPO offerings that you might miss out on, if you strictly followed this criteria. But what are the odds of that happening? Even 50–50 chance is not acceptable, as per the margin of safety. How about 5.3–94.7 for the odds?

There is yet another advantage of investing only in strong companies; it allows you to become a contrarian, when the whole market is bearish you can step-in to buy good company stocks at cheap prices. You can never do it with a weak company or the IPO issues with conviction.

d. Rule-4: Watch Your Commissions and Capital Gains Taxes

The traditional wisdom, which says 'stock investing is a zero-sum game', is a myth. Even if you bought and sold (a stock) at the same price, you would end up poorer than when you started. Merely to enter into the market (as a buyer or seller) you must pay brokerage and service taxes first. As soon as you make your transaction, your equity will turn negative; so at best you can call it as a 'negative-sum' game. So, it makes sense to spend less of your money on brokerage. The more you trade, more money is lost in brokerage. Investing for the long-term means less trading, which should minimize your brokerage commissions. Moreover, more trading means paying more money on taxes, in countries where capital gains are taxed. These savings will directly add up to your bottom line.

e. Rule-5: Leverage

Your decision to hold your stocks for a long time implies that you cannot use borrowed money for funding the purchase (using margin accounts) as it makes no sense to pay interest charges over the long-term. By the way, the margin account interest rates are not cheap and you will save a bundle by not paying interest. Every time my clients were able to hold on to a good stock, they never lost money, even when they faced paper-losses in the interim. And every time my clients over extended themselves (with leverage) for short-term gains, they never made it. This is one of the motivating reasons that prompted me to write this book.

f. Rule-6: Admit Mistakes and Right the Wrongs Early

It is an inherent nature of the human beings to have the need 'to be right'. Since all of us are endowed with similar needs, albeit with varied degrees, we get along passably well in our societies. So much so, most of us may not even realize that we are catering to these needs (of ours), when we are dealing with our day-today activities. In the 'real' world outside, we may feel the need 'to be right' to appear skillful or virtuous in the eyes of people around us. We are also perpetual seekers of appreciation, a habit inculcated in us since childhood. While this is plain stupid already, bringing this habit into the financial markets can be even more dangerous because it can affect our financial wellbeing. Furthermore, there is no one 'around us' in the financial markets to impress. We don't know whom we are up against in the market. Therefore, how can we impress someone we don't even know?

Having read in the previous section, you would fairly have an idea as to how tough the competition really is. The professionals working for fund management companies and other organizations will obviously have their supervisors to answer to. Such entities will have a rather disciplined approach to admitting and correcting their mistakes early. Therefore, the competition appears to be 'very well organized' compared to the retail investors. There are exceptions, of course. From time to time, we hear of a few traders causing the collapse of very large banking corporations. Even then, not admitting the mistakes early, compounded by supervisory lapses is the single common cause cited for all such failures.

Admitting our mistakes and cutting our losses early minimizes the quantum of loss. Riding on losing positions for long can be too dangerous for our portfolios as there is no limit on how much we may lose. The money locked up in the losing positions can be better employed in other fruitful opportunities. After all there are thousands of companies to choose from; why limit our horizon holding on to the losers? Interestingly, most of us would sell winners too early and hang on to the losers, due to our own psychological make-up, not one bit due to any logical reasoning. It takes a very strong will power to override our emotions to do just the opposite. However, if we can admit our mistakes early and cut losses as a rule, then we can over-come the ill effects of our emotions with relative ease.

As we had seen in an earlier chapter, the ability to correct mistakes is one of the major advantages of investing in the stocks compared to investing in business partnerships. If an investment in a business partnership had turned out to be a mistake, you may not be able to correct the mistake. Getting out of such ventures is not easy. However, we can easily correct our mistakes in stock investments. We know that Mr.Market is there on every market-day providing us with a quote for our own convenience. It is up to us to make use of Mr.Market to our advantage without getting scared off by his extreme mood swings.

g. Rule-7: Margin of Safety

The biggest advantage of this principle is, it will keep you rooted to the ground regardless of what is happening; when the market is making leaps and bounds, it will stop you from reaching out for your checkbook; when the market is touching new lows you would not be afraid to venture out alone. This is the only way by which you can practice the most cherished strategy of 'buy low; sell high'. The financial markets do not obey the laws of physics; some actions may not have equal and opposite reactions; there is no single strategy that will work for you all the time. You may lose money in spite of following the margin of safety. But, one thing for sure is, your losses will be lower than those who bought stock at much higher prices. Don't mistake me, I am not asking you to be happy because someone else had lost more than you. The idea is, if you diversified your holdings the gains from the winning stocks should more than offset your losses.

Why then people tend to rush to pay more for stocks in a bull market, while at the same time refuse to even pay far less for the same thing in a bear market? Wanting to pay less for a thing is an inborn human trait. Every war in the past had been motivated to get more for less. So, why a book is required to teach something, we ought to have wired up in our DNA? This is because we always take comfort treading in groups in unfamiliar terrains. For most common people, investing is way above at the top in terms of unfamiliarity. So, it is no small wonder that most people prefer to follow the herd. When everyone is bullish, we tend to pay high prices in the fear of getting left out of the group. It is hard to have a rational mind when we see our neighbors and colleagues making it big in the stock market. Similarly when everyone seems to be fearful in a bear market, naturally we feel safer to be in the group refusing to buy cheap stocks on offer. However in familiar settings such as super markets, we know how to recognize a bargain sale and behave exactly like *sensible human beings*, that is, trying *to get more for less*. So, the real issue is one of unfamiliarity.

If you are conscious of your own safety you will never rush to board on to a moving train. In the same way, if you applied the principle of margin of safety, you will never try to catch the highfliers. Most speculators lose huge amounts of money by paying too much for such highflying low-quality stocks. If you can avoid this one mistake, you have done great for your investment and your sleep at night.

When you combine the disciplines listed above, you would have developed your own edge, which should serve you very well. You will never have to ask a friend, a colleague or a broker for investment tips in future. The fact of the matter is none of those tips are always reliable. I have personally come across several stories (including my own) of people investing in the market based on tips from friends and colleagues. I am yet to hear a happy one.

3. In Parting

You have finally reached the last section in the last chapter of this book and at the same time the first chapter of your 'new' investment journey. If you are new to investments then remember you are relatively lucky because you have learnt all the good methods before entering the market. There is nothing much to unlearn for you. You may not have paid too much in tuition fees for learning what you did. But, if you have already been in the market, gotten your hands dirty, then you may have to clean up your habits; unlearn some of your methods. You may have also paid quite a fair bit of money in tuition fees. Learning from your own mistakes in the market always comes with a huge price tag.

If this is the first book you have read on investing, let this not be your last. There are several books listed in the bibliography section of this book for your continued education. Keep yourself on this journey trying to learn from other people's ideas and mistakes. Successful investing requires only your time and patience, not a lot of money. Fortunately, investing does not require too much intelligence also; take it from the wisdom of world's greatest investor Warren Buffett.

To invest successfully over a lifetime does not require a stratospheric IQ, unusual business insights or inside information. What's needed is a sound intellectual framework for making decisions and the ability to keep emotions from corroding that framework.³

Warren E Buffett

Always think of investment as your second employment; not as a 'get rich quick', scheme. You will need to put in time, effort and continuous learning in your investment endeavors just as you would do to excel in your current employment. *The only difference is that the investments require a lot less time, effort, education and intelligence than your current employment.* Read the chapter on investing psychology once again. If you already have experience in investing, then you can easily relate yourself to the examples provided. If you are new to investing, you may talk to a colleague or a friend who has had the experience. I must warn you, most people would not tell their worst nightmares in great details, so for this reason, you must also read other books on investment psychology, as I believe this is one of the most important subjects you must have a good working knowledge on.

Through these chapters, I believe I have accomplished the task of presenting only the relevant ideas distilled for consumption of working people who aspire to be investors. As I had promised, every idea found in this book will either help you lower your risk or increase your returns. I have been very careful not to loosely include any unsafe ideas or methods in this book. I sincerely hope that the soundness of the ideas found in this book will amply overshadow the defects of my writing.

In parting I would like to remind you, investing is neither easy and nor difficult. It is like playing a game of golf; you are your own best friend and worst enemy bundled up into one; presence of any opponent, however skillful he or she may be, cannot affect your own game. You and you alone can make it or throw it. I wish you had made it without losing your sleep through the ideas presented in this book.

To Summarize...

- 1. After knowing the strengths of your competition answer these questions. What is your edge? Is it superior to those millions of people like you? Is it superior to those millions of traders and professionals? Knowing very well, someone must lose money for you to make, who do you think is going to be charitable? What chance do you have to survive in this game? Not much, unless you develop your own edge and a system for yourself.
- 2. Presence of so many professional investors and money managers scouring the markets with microscopes for short-term opportunities makes the market very efficient in the short-term.
- Most of the crowd does not focus on long-term (performance) outlook. This may be your opportunity. In fact, this is the only opportunity for the working class retail investors.
- 4. Investing only in strong companies will allow you to become a contrarian, when the whole market is bearish you can step-in to buy

some more at cheap prices. You can never do it with weak companies or the IPO issues with conviction.

- 5. As soon as you make your transaction, your equity will turn negative because of the money spent on commissions and spread; at best you can call it as a 'negative-sum' game not 'zero-sum game'. So, it makes sense to spend less of your money on brokerage. The more you trade, more money is lost in brokerage.
- 6. Your decision to hold your stocks for a long time means you cannot use borrowed money for funding the purchase (using margin accounts) as it makes no sense to pay interest charges over the long-term.
- 7. If you are conscious of your own safety you will never rush to board on to a moving train. In the same way, if you applied the principle of margin of safety, you will never try to catch the highflying stocks.

End Notes

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Notes

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