CHAPTER II
RISK MANAGEMENT

Risk management is an appropriate and important practice for all investors. In fact very few investors succeed in complying with all the standards or rules proposed by risk management experts. However, a strong risk management system will minimise errors, provide a structure to the investment process and ultimately enhance returns.

The concept of risk plays a crucial role in the contemporary finance theories. One of the most written about and debated concepts in the financial world is ‘risk’. Ultimately every investment carries an inherent risk of failure. Risk is the potential loss an asset or a portfolio is likely to suffer due to a variety of reasons. In economic literature the word ‘risk’ is taken to mean a situation where the possibility of occurrence of a particular result is quantifiable and therefore, insurable. Broadly, risk is the volatility of potential outcomes.

Webster’s dictionary defines risk as ‘the chance of injury, damage or loss’. However, risk is not always unwelcome as, if there is no risk, there is no dynamism and no progress. But then, excessive risk is not desirable because it can spell disaster.
Risk management can be simplified by dividing the process into manageable parts. There are three major categories of risk that also overlap with each other. Those categories are:

1) Market risk:

   It is caused by investors’ reaction to price-sensitive events. Price sensitive events may be real or unreal and it may be related to business cycles, unanticipated market events etc. Since it affects all securities, it cannot be eliminated by portfolio diversification.

2) Counterparty risk

   Investors assume great risks when they interact with brokers and other intermediaries. The brokers may commit default in discharging their obligations to the exchange and also to the investors.

   Counterparty risk is caused by failure of intermediaries. Investors should understand the legal nature of relationship with the brokers and other intermediaries.

3) Operational risk:

   This is the broadest category of risk. It is multifaceted and ranges from excessive leverage enjoyed by operators, lack of checks and balances etc. to serious violation of trading norms. The key to
success in risk management is to follow a simple and balanced approach. To minimise the operational risk, the authorities should introduce a system of checks and controls.

The process of Risk Management

K.N Subramanya defines 'Risk Management' as the process of identifying and controlling risk. The process of risk management has three clearly identifiable steps, viz., a) risk identification b) risk measurement and c) risk control.

a) Risk identification

Risk identification as the starting point consists of naming and defining each of the risks associated with a transaction. It is to pinpoint each of the risks associated with a transaction. The process must be an ongoing one to ensure that a risk is discovered before it culminates into a loss.

b) Risk measurement

Risk measurement is the estimation of size, probability and timing of potential loss under various scenarios. This is the most difficult step in the risk management process. The potential loss is generally defined in terms of 'frequency' and 'severity'. According to S. Rajagopal, member of faculty (Asst. general Manager), College of Agricultural
Banking, R.B.I., Pune, frequency can be further divided into four broad divisions of probability, viz, none or almost nil, slight, moderate and definite severity is measured in three categories, viz, slight, substantial and severe. This can be diagrammatically shown as under.

This classification would be helpful in assessing the ranges of loss of various portfolios, says S. Rajagopal.

According to P.L. Mehta, one of the scientific and operational methods to take account of risk element in investment is the probability theory approach. According to this approach it is not possible to represent the complete range of possible alternative returns of a risky investment, by using a single expected return value. We must, therefore, weigh all the expected alternative returns. In this method we have to determine a range of possible cash flows for each year, ranging from optimistic to pessimistic values and to assign probability to each of these cash flows. The cash flow is multiplied by the respective probability to get the expected cash flow as explained by P.L. Mehta in table 1.
Table 2.1
Risk measurement-the probability approach

<table>
<thead>
<tr>
<th>Event</th>
<th>Cash flow Rs.</th>
<th>Probability</th>
<th>Expected cashflow Rs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>1000</td>
<td>0.0</td>
<td>-</td>
</tr>
<tr>
<td>2.</td>
<td>1200</td>
<td>0.1</td>
<td>120</td>
</tr>
<tr>
<td>3.</td>
<td>1400</td>
<td>0.2</td>
<td>280</td>
</tr>
<tr>
<td>4.</td>
<td>1600</td>
<td>0.4</td>
<td>640</td>
</tr>
<tr>
<td>5.</td>
<td>1800</td>
<td>0.2</td>
<td>360</td>
</tr>
<tr>
<td>6.</td>
<td>2000</td>
<td>0.1</td>
<td>200</td>
</tr>
</tbody>
</table>


Expected cash flows of different investment opportunities should be compared before taking an investment decision.

An idea of the basic theorems of probability theory is necessary for its use by a decision maker. These are given below:

*Theorem 1.*

The probability of an event lies between zero and one. If the event is fully certain to occur, the probability of this event equals one; while, if an event is certain not to occur, its probability equals zero.

*Theorem 2.*

If 'n' events are equally likely to occur, then probability of any one of the events equals $1/n$. 
From the Table 1 it may be noted that the probability of occurrence of each event is less than one, but equal to or greater than zero, also that the sum total of probabilities is exactly equal to one. According to the theory of probability this is a necessary condition of assigning probability to mutually exclusive and collectively exhaustive events. [Mutually exclusive event = Two events are said to be mutually exclusive if the occurrence of one of them excludes or prevents the possibility of the occurrence of the other, ie, two mutually exclusive events cannot occur simultaneously in the same trial.

Collectively exhaustive events = A group of events is said to be exhaustive when it includes all possible outcomes of the random experiment under consideration].

c) Risk control

After identification and assessment of risk factors, the next step involved is risk control. According to S. Rajagopal, the major alternatives available in risk control are:

i. Avoid exposure to risk: Avoidance of the exposure will mean withdrawal from transactions, which are highly risky.

ii. Reduce the impact by reducing frequency or severity. It involves reduction in the number of cases where exposure is involved.
iii. Avoid concentration in risky area. One of the major strategies of risk control is to avoid "Risk Concentration" in the portfolio.

iv. Transfer the risk. "Risk spread" is the concept where the risk is transferred from one variable to another.

v. Employ risk management instruments to cover the risk.

According to V.T. Godse, Chief Manager International Division, Bank of Baroda, risk control has two sub-categories: the first relates to policy while the second is risk-mitigating activity. Having proper policies helps to define the limit to which one can take risk. The goal of such policy is to keep the outcome within risk tolerance ranges. The other aspect of risk control is risk-mitigating activity.

The available options for risk mitigation could be:

i. Risk transfer (insurance or hedging)

ii. Elimination or avoidance (staying out of risky business)

iii. Reduction (specification and adherence to limit).

Definitions of Risk Management

According to Terry J. Watsham, "Risk Management is effectively managing the amount of exposure to an uncertain event." He further says that the uncertainty associated with the future value of a financial instrument is generally beyond the control of the risk manager.
Andy Ford, Director of Operations (Asia-Pacific) at ‘Infinity’ defines risk management as follows. “Risk Management is knowing what one can do and knowing what one should do”.

“Getting to know the unknown” - that’s the simplest definition we can have of risk management, as described by Ameet Parekh, Partner at Arther Andersen and The Economist Intelligence Unit Ltd. Especially given the fact that most risks are not visible, and that risk is constantly changing.

Mark Ward of Arther Andersen and the Economist Intelligence Unit Ltd. defines risk management, “Positive risk management would mean better foundation for setting strategy, increased likelihood of achieving goals, reduced cost of capital and increased shareholders’ value”.

V.T. Godse, Chief Manager, Bank of Baroda defines risk management as “the continuous process of identifying and capitalising on appropriate opportunities while avoiding inappropriate exposure”. In clear words he further explains, “risk is a multidimensional concept and risk management is a continuous activity. What is required is anticipating and preventing risk at the source and the continuous monitoring of risk control and ineffective processes which are the primary source of risk.”
According to A Selvaraj, Risk Management can be defined as "the process of planning, organisation, directing and controlling the resources and activities of an organisation so that the probability of loss or injury is reduced to the lowest possible level at the lowest cost".9

Risk Management is "the systems and procedures designed to deal with multiple types of risks e.g. credit, market, operational that arise out of dealing in different asset classes e.g. currencies, equities, time zones", says Mukul Gupta, Principal, Banking Practice, K.P.M.G. India Ltd. He continues, "The objective of a risk management process is to obtain information and analyse data so that uncertainty is turned into quantifiable risk and appropriate action can be taken to mitigate the risk or contain it."10

"Risk Management is the continuous process of identifying and capitalising on appropriate opportunities while avoiding inappropriate exposures in such a way to maximise the value of the enterprise" Says V.T. Godse.11

**Importance of Risk Management**

"Positive Risk Management would mean better foundation for setting strategy, increased likelihood of achieving goals and reduced cost of capital"- says Markward of Arther Andersen and the Economist Intelligence Unit Ltd12. A clear risk perception is necessary
to evaluate and appreciate risk control measures. The importance of risk management may be viewed from the point of view of the investor as given below:

\(a)\) Managing volatility

Equity market doesn't move in reliably predictable patterns. Market cycles are not regular. The retail investor finds it difficult to live through the volatility in stock market. We know from experience that retail investors enter the rising market and exit a falling one. In the process they generally end up with very small profits on their investment, or sometimes suffer a loss. Volatility can work to the advantage of a disciplined investor who manages risks properly.

\(a)\) Avoiding disasters

Gains in stock market seem to be easier than in many other business activities. All those who wish to make quick gains via the stock market must bear in mind that this can be done only at a much higher risk than other forms of investment. Equities yield higher returns but carry higher risks also. In the stock market a disaster is sure to occur if one does not manage the risks properly. To profit from investing, one should plan his investment, ie, risks related to the investment should be properly managed.
c) Risk identified

It is often noticed that most investors have a fear of the unknown in respect of stock markets. Very few people understand the nitty gritty of trading in the stock market. Many investors believe that stock markets are nothing but a gamble den. Most of the risks in the stock market proceed largely from ignorance. They could be avoided by understanding them properly. Risk management aims at identifying the various risks an investor has to face. He is no more in the dark.

d) Measuring risks

For almost all investments there is some risk or loss. For most investments, one does not know exactly the rate of return he is going to get. Sometimes this uncertainty offers an opportunity for large returns. Risk management measures the various probabilities that may arise in a particular investment. It can show the strengths and weaknesses of an investment.

e) Risk control

By risk management, an investor can set the limit to which he can take risk. The role of risk management is to keep the outcome within risk tolerance ranges. Risk can be controlled and the loss can be mitigated by applying risk management principles as given below:
1. Risk can be transferred (hedging)

2. Risk can be eliminated (staying out of risky business)

3. Risk can be reduced (specification and adherence to limit)

f) Guiding the investor

Most of the investors would admit that their worst investments were made on the advice of some ‘friend’ who gave them a rosy picture of the future prospects of the company. When people buy stocks on the advice of friends without gathering information about the promoters and future working of the company, they incur heavy losses. A disaster is sure to occur where investment is made without making the most elementary effort to understand where the investment is made and what is the risk involved. Here risk management is a guide to the investor.

g) Profit from timing

An investor is not sure of the safety of his investment even when he has made many efforts to safeguard his investment and invests only in well-known stocks. We find that shareholders continue to retain holdings though the company starts posting poor performances. All stocks must ultimately be sold either for profit or loss. Scientific risk management can help the investor to profit from correct timing of purchase and sale.
h) Avoiding panic selling

It is natural that not all investments in the market yield a profit. Even the well-studied investment can go wrong. Sometimes business environment changes so rapidly that the price of stock may reach the nadir. Stock markets are usually held hostage by politics also. Panic selling only turns paper losses into real losses. Planning and managing the portfolios properly can turn the losses into real profits.

Change is the name of the game in the stock market. On the Internet, one can trade instantly and transparently from any part of the world. The investor can get a feel of the Bombay On-Line Trade (BOLT) on his screen itself. The website can give the investor valuable information such as company profit analysis, company’s annual report etc to keep him well informed of the company’s performance. Thus the Internet trading has completely revolutionised the stock trading. In this whirlwind of change, investor who study risk-return relationship in the light of prevailing market conditions and risks, get the golden opportunity of making large returns.

Risk Management in the Indian Scenario

The role of capital market in India’s economic development has been significant, as exemplified by the amount raised and their share in the aggregate financial assets. From a mere 990 million in 1975,
funds raised in the market increased more than hundred-fold by the late eighties. Similarly, the proportion of shares and debentures in the gross savings of the household sector in the financial sector increased from 3.7% in 1980-81 to 8.9% in 1994-95. In March 2000, there were more than 9000 companies listed on Indian stock exchanges whose aggregate paid up capital was Rs. 1748 billion and market capitalisation was Rs. 6,396 billion.

India has one of the fastest growing stock market among the emerging markets. It occupies the sixth position in terms of market capitalisation among the emerging markets, as at the end of September 1999, behind Taiwan, Korea, South Africa, Greece and China, as shown by the study of The Economic Times Research Bureau. The market capitalisation of the Bombay Stock Exchange crossed $1,84,000 million and is running neck to neck with China, whose market capitalisation on the Shanghai Stock Exchange was $186956 million at the end of Sept 1999. Even the market capitalisation of one Indian company 'The Infosys' is more than the whole market capitalisation of the Karachi Stock Exchange.

In terms of companies listed, India tops the charts with 7,064 companies listed on the Bombay stock exchange, which is second in the world only to Germany, which has 8136, listed companies on the Deutsche bourse. All the other emerging markets have fewer than 1000
companies listed with Egypt holding second position, far behind Athens Stock Exchange with 936 companies listed, followed by Pakistan with 769 companies, listed on the Karachi stock exchange\textsuperscript{17}.

According to LC Gupta, the twenty-one stock exchanges together achieved single-day turnover of Rs. 13,500 crore, putting India in the world's league of stock exchanges, such as New York, London, Hong Kong etc. But the truth is that the great bulk (over 85%) of the reported Indian turnover is really bogus in as much as the value of shares delivered is only 13\% of the trading turnover, as per SEBI's data for 1998-1999\textsuperscript{18}. The importance of risk management is obvious as the Indian stock exchange is considered a high-risk market which scares investors away.

In a recent survey conducted by The Economic Times among a cross-section of companies answered 'yes' to their question whether the Indian equities market is frequently manipulated despite SEBI's regulations. Nearly 86\% of the respondents agreed that the Indian market is more speculation oriented and about 62\% felt that the market is excessively volatile\textsuperscript{19}. In such a market it is sure that many investors withdraw after incurring heavy losses.

The genuine investors have become disillusioned with the equity market. The number of shareowners has stopped growing since 1995. The equities market, both primary and secondary, acquired an
extremely negative image among genuine investors, resulting in the
drying up of the savings flow into the market. The primary market is
infested with predatory promoters while the secondary market is
dominated by manipulative operators.

In this changed scenario, risk management of investing in
corporate securities has attained particular significance. For the
development of the economy our nation requires massive capital. India
still enjoys very low credit rating in the international markets. The
capital for the development of the economy has to come mostly from
the domestic market. Investment in the New Issues Market and the
Secondary Market is dependent on the confidence of the investors.
Therefore an upward trend in mobilisation of capital market can be
achieved only when investors are satisfied about their returns. By
raising the confidence level of investors, risk management results in
sustained growth of equity culture, which is a highly desirable
phenomenon for the growth of the economy. The equity culture
directly contributes to the growth of the net worth of the companies
and in that way it contributes to the growth of capital in the economy.

Objectives of Risk Management

Risk is the chance that the actual return from an investment
will differ from its expected return. It is the inability to predict with
knowledge the course of future events that introduce risk. Investors are
primarily concerned about how to achieve the highest possible returns without bearing unacceptable risk. Future return is an expected return and may or may not actually be realised. Risk, or the chance of an unexpected return, is involved when investment decisions are made.

Though risks cannot be completely eliminated it can be reduced by adopting precautionary measures. That is, by proper management of risk factors, the intensity of loss of investing in corporate securities can be minimised. For an investor risk management is of immense use in the following ways.

a) To identify the various types of risks related to a particular investment.
b) To measure the risks and to compare the different investment opportunities.
c) To control the risk factors.
d) To find out the best time for purchase or sale of securities.
e) To plan the portfolios.
f) To attain efficiency in operations.
g) To stabilise earnings.
h) To help in investment decisions.
i) To raise the confidence of investors.
j) To take precautions against risks.
k) To define the limit to which an investor can take risk.
Investors must estimate and manage the returns and risks. Understanding risk means that investors can consciously plan for the consequences of adverse outcomes and by doing so, be better prepared for the inevitable uncertainty.

An overview of the existing theories and techniques of evaluating securities

Before venturing into the capital market investors have to learn the basics and apply them diligently to make gains from investment. Enquiry conducted by the researcher has found that many investors turn to investment in shares without knowledge of the theories and other essentials needed to manage the risks in the stock market. Despite the fact that much vigilance and safeguards are necessary in this field, the investors often fail to exercise utmost diligence, and the result is huge losses and frustration leading to their forced exit from the market. In this background the researcher makes an attempt to bring forth the basis of investment and risk management—the existing theories of evaluating corporate securities.

Investment – Definition

Investment is an activity, which is different from saving. It involves the commitment of resources, which have been saved in the hope that some benefits will accrue in the future. The essential quality of an investment is that it involves waiting for a reward. An investment
is a commitment of funds made in the expectation of some positive rate of return. Every investment involves return and risk.

A difference is noted between investment in the financial sense and economic sense. In the financial sense, investment is the commitment of a person's funds to derive future income in the form of interest, dividend, premiums, pension benefits or appreciation in the value of their capital. In the economic sense, investment means the net additions to the economy's capital stock, which consists of goods, and services that are used in the production of other goods and services. Investment in this sense implies the formation of new and productive capital in the form of new constructions, plant and machinery, inventories etc. Such investments generate physical assets.

**Features of Investment**

Investments are characterised by the following features:

a. *Return*

In fact, investments are made with the primary objective of deriving a return. The return may be received in the form of yield plus capital appreciation. The difference between the sale price and the purchase price is capital appreciation. The dividend or interest received from the investment is the yield.
b. Risk

Risk is inherent in any investment. This risk may relate to loss of capital, delay in repayment of capital, non-payment of interest or variability of returns. While some investments like government securities and bank deposits are almost riskless, others are more risky.

c. Safety of Capital

The safety sought in investments is not absolute or complete; it rather implies protection against loss of capital. Every investor expects to get back his capital on maturity without loss and without delay.

d. Liquidity

An investment is a liquid asset if it can be converted into cash without delay at full market value in any quantity. For an investment to be liquid it must be-a) reversible or (b) marketable. Reversibility is the process whereby the transaction is reversed or terminated while marketability involves the sale of the investment in the market for cash.

Need for Investment

Investments are significant and useful in the context of present day conditions. Some factors that have made investment decisions increasingly important are given below:
Inflation

Inflation has become a continuous problem for every investor. In the fifties prices remained more or less constant. They did rise marginally but the rise was too small to have any significant impact on the cost of daily living. As a result, most people felt economically secured and did not feel the necessity to take investment seriously. At present, there is a high rate of inflation and as a result thrift and accumulated savings are no longer enough to provide for the future. Savings have to be intelligently invested and these investments have to be actively managed in preserving the purchasing power of money.

Income

With the increase in employment opportunities as a result of productive investment of capital, the income of the people has increased. An active monsoon boosts agricultural production and a part of the income generated may be channelled to various avenues of investment.

Planning for retirement

Investment decisions are also needed as people retire between the ages of 55 and 60. The earnings from employment should be calculated in such a manner that a portion shall be set aside as savings. The savings must be invested in such a way that the principal and income would be sufficient for a longer retirement period.
Increasing rates of taxation

Taxation is one of the crucial factors in any country which introduces an element of compulsion in a person’s savings. There are various forms of savings outlets in our country in the form of investments which help in bringing down the tax level in personal income.

Interest Rates

Another aspect which is necessary for a sound investment plan is the level of interest rates. Usually a high rate of interest favours the outlet for fixed income bearing securities. Stability of interest is as important as receiving a high rate of interest.

Investment channels

The growth and development of the country leading to greater economic activity has led to the introduction of a vast array of investment avenues. Apart from putting aside savings in banks, investors have a choice of a variety of instruments. Some of the instruments available are debentures, fixed deposits, provident fund, life insurance, unit trust schemes, corporate stock, etc.

Theories of Evaluation of Securities

Risk and return are two important characteristics of any investment. Security evaluation implies estimation of the return and risk associated with securities over a holding period. There are two aspects of security evaluation-
1. To determine the true value of a security through a rigorous analysis of its value parameters and

2. To determine whether the security is mis-priced by the market or not.

A security is mis-priced if it is over valued or undervalued by the market. Overvaluation occurs where the market price of a security is more than its true value or intrinsic value. Conversely, a security is presumed to be undervalued if its true value is higher than the market price.

Though this basic rule in security management ie., buying undervalued and selling overvalued securities is conceptually simple, the actual process is very complicated.

The search for foolproof models for identifying mis-priced securities has led to sharp divisions among the ranks of security analysts. There are essentially three main schools of thought on the matter of security price evaluation. They are classified as –

1. The fundamental approach

2. The technical approach and

3. The efficient market approach
1. The fundamental approach

The fundamental approach also called the fundamental analysis is really a logical and systematic approach to estimating the share price. It is based on the basic premise that share price is determined by a number of fundamental factors relating to the economy, industry and company. Each share is assumed to have an economic worth based on its present and future earning capacity. This is called its intrinsic value or fundamental value. The theory can be summarised as follows:

1. Every security has an intrinsic value.

2. The intrinsic value of every security is reflected by its market price.

3. Fundamental factors relating to the economy, industry and company determine the intrinsic value of securities.

The Intrinsic Value

The intrinsic value is the true economic worth of a financial asset. The fundamentalists maintain that at any point of time every share has an intrinsic value, which should in principle be equal to the present value of the future stream of income from that share. The investor can compare the intrinsic value of the share with the prevailing market price to arrive at an investment decision.
Economy - industry - company Analysis Framework

The analysis of economy, industry and company fundamentals constitutes the main activity in the fundamental approach to security analysis. These can be viewed as different stages in the investment decision-making process and can be depicted graphically with three concentric circles as shown below.

Fig. 2.1 Source: Kevin S, *Portfolio management*, Prentice Hall of India Pvt. Ltd., New Delhi, 2000. P.28
The logic of this three-tier analysis is that the company performance depends not only on its own efforts but also on the general industry and economic factors. A company belongs to an industry and the industry operates within the economy.

Regardless of how sophisticated the techniques used, a complete, painstaking fundamental analysis, based on relevant facts, is a logical way to estimate the true value of a going concern. Understandably, fundamental analysis is the most widely used method of estimating security prices.

2. The Technical Approach

The Technical approach or the technical analysis is an alternative approach to predicting the stock price behaviour. It is based on the widely accepted premise that security prices are determined by the supply of and the demand for securities. The Tools of technical analysis are therefore designed to measure supply and demand. Typically, the technical analysts record the historical financial data on charts, study these charts in an effort to find meaningful patterns and use these patterns to predict future prices. Some charting techniques are used to predict the movements of a single security, some are used to predict the movements of a market and some are used to predict both the action of individual securities and the market action.
The Basic assumptions of technical analysis

The basic assumptions underlying technical analysis may be summarised as follows:

1. The market value of a security is determined solely by the interaction of supply and demand.

2. Supply and demand is governed by numerous factors, both rational and irrational.

3. In disregard of minor fluctuations in the market, stock prices tend to move in trends that persist for an appreciable length of time.

4. Changes in trend are caused by shifts in supply and demand.

5. The shifts in demand and supply can be detected through charts prepared specially to show market actions.

6. Some chart patterns tend to repeat themselves.

Thus technical analysis is really a study of past or historical price and volume movements that could be used to predict the future stock price behaviour.

The Dow Theory

The Dow theory is one of the oldest and most famous technical tools. It was originated by Charles.H.Dow. The theory states that the stock market does not move on random basis but is influenced
by three distinct cyclical trends that guide its direction. He said that by following these trends, the general market direction could be predicted. Dow classified these cycles as primary, secondary and minor trends.

*Primary Trend*

The primary trend is the long-range cycle that carries the entire market up or down. This trend usually last from one to three years or sometimes even more. It is observed that the share markets go into definite phases where the prices are consistently rising or falling. These phases are known as bull and bear phases.

*Secondary Trend*

Even when the primary trend is upward there are also downward movements of prices. Similarly, even when the primary trend is downward, there is an upward movement of prices also. These movements are known as secondary movements and are shorter in duration and are opposite in direction to the primary trend. The Secondary trends usually last from several weeks to several months in length.

*Minor Trends*

These are daily movements or irregular fluctuations that occur every day in the market. These fluctuations are without any definite trend and are the result of speculative factors. An investment manager
really is not interested in the short-run fluctuations in the share prices. It may be reiterated that any one who tries to gain from short-run fluctuations in the stock market can make money only by sheer chance.

Fig 2.2 Primary trend and secondary reactions

Timing of investment decisions on the basis of The Dow's Theory

Ideally speaking, an investor would like to purchase shares at a time when they have reached the lowest level and sell them at a time when they reach the highest peak. However, in practice, this seldom happens. Even the astute investor can never know when the highest peak or the lowest bottom has been reached. Therefore, he has to time his decision in such a manner that he buys the shares when they are on the rise and sells them when they are on the fall. It means that he should be able to identify exactly when the falling or the rising trend has begun.

This is technically known as identification of the turn in the share market prices. Identification of this turn is difficult in practical situation because of the fact that even in a rising market the prices keep on falling as a part of the secondary movement. Similarly even in a falling market the prices keep on raising temporarily. It is not sure that the rise in the prices or the fall in the same is due to real turn in the prices from a bullish to a bearish phase or vice versa or that it is only due to short-run speculative trends.

Technical analysis may be used for more than a supplement to fundamental analysis. In defending their practices, most technical analysts do not accuse fundamental analysts of being illogical or
conceptually in error. In fact, many technical analysts would agree with fundamental analysts that security prices do fluctuate around their true intrinsic values.

Investors can use technical analysis as a useful supplement. Even if a fundamental analyst does find an under priced security, he must wait and hope that the rest of the market recognizes the security’s true value and bids its price up.

3. The Efficient Market Approach

Market efficiency implies that all known information is immediately discovered by all the investors and reflected in share prices in the stock market. As such; no one has an information edge. In the ideal efficient market, everyone knows all possible to know information simultaneously, interprets it similarly and behaves rationally. But, in actual practice, this seldom happens.

The requirements for a securities market to be efficient are:

1. Prices must be efficient so that new inventions and better products will cause a firm’s security prices to rise and motivate investors to buy its stock;

2. Information must be discussed freely and quickly across the nations so that all the investors can react to new information;

3. Transaction costs such as sales commissions on securities are ignored;
4. Taxes are assumed to have no noticeable effect on investment policy.

5. Every investor is allowed to borrow or lend at the same rate; and finally;

6. Investors must be rational and able to recognise the efficient assets and that they will want to invest money where it is needed most.

**Forms of the Efficient Market Hypothesis**

In an efficient market, it is impossible to make above average return regardless of the information available, unless abnormal risk is taken. Moreover, no investor or group of investors can consistently outperform other investors in such a market. The three generally discussed forms of the efficient market hypothesis, namely, the weak form of the efficient market hypothesis, the semi-strong form and the strong form are given below.

**A. The Weak Form**

The weak form says that the current prices of stocks fully reflect all the information that is contained in the historical sequence of prices. Therefore, there is no benefit in examining the historical sequence of prices as far as forecasting the future is concerned. This weak form of the efficient market hypothesis is popularly known as the Random walk theory. The stock prices approximate a random walk. As time passes, stock prices wander or walk more or less randomly
across the charts. Since the walk is random, a knowledge of past price changes does nothing to inform the analyst about whether the price tomorrow, next week or next year will be higher or lower than today’s price.

The weak form of the efficient market hypothesis is summed up in the words of Adam Smith, author of the Money Game: “Prices have no memory and yesterday has nothing to do with tomorrow”.

B. The Semi-strong form

The semi-strong form of the efficient market hypothesis says that the current prices of stocks not only reflect all informational content of historical prices but also reflects all publicly available knowledge about the corporations being studied. Furthermore, the semi-strong form says that efforts by analysts and investors to acquire and analyse public information will not yield consistently superior returns to the analysts. Examples of the type of public information that will not be of value on a consistent basis to the analyst are corporate reports, corporate announcements, information relating to corporate dividend policy, forthcoming stock splits and so forth.

In effect, this hypothesis maintains that as soon as information becomes publicly available, it is absorbed and reflected in the stock prices. Even if this adjustment is not the correct one immediately, it will in a very short time be properly analysed by the
market. Thus the analyst would have great difficulty trying to profit using fundamental analysis. Further, even while the correct adjustment is taking place, it will not be possible for the analyst to obtain superior returns on a consistent basis. This is because of the fact that the correct adjustments will not take place in a consistent manner. That is, sometimes the adjustments will be over adjustments and sometimes they will be under adjustments. Therefore, an analyst will not be able to develop a trading strategy based on these quick adjustments to new publicly available information.

C. The Strong Form

We have examined the semi-strong form of the efficient market hypothesis, which says that publicly available information cannot be consistently applied to earn superior investment returns. Finally, the strong form of the efficient market hypothesis maintains that not only is publicly available information useless to the investors or analysts but all information is useless. Specifically, no information that is available, be it public or “inside” can be used to consistently earn superior investment returns. This implies that not even the security analysts and portfolio managers who have access to information more quickly than the general investing public are able to use this information to earn superior returns.
There is a great deal of controversy over the efficient market theory. On the one hand, statisticians continue to provide evidence in favour of the theory and on the other hand, economists and financial analysts continue to state that they do not believe in the correctness of the theory.

To sum up, there are three broad theories concerning the stock price movements. The fundamentalists believe that by analysing key economic and financial variables, they can estimate the intrinsic worth of the security and then determine what investment action to take. The technical school maintains that the fundamental analysis is unnecessary and all that has to be done is to study historical price patterns and then decide how current price behaviour fits into these. Since the technician believes that history repeats itself, he can then predict the future movements in price based on the study of historical patterns. The efficient market theory states that no patterns exist in the price changes of securities.
Foot Notes


17. Ibid


19. Ibid.

20. Ibid.


22. Ibid. P.71