Chapter I

Introduction

1.1 Selection of Topic:

“Study of Share Price Fluctuations in BSE & NSE above 6% on Any Particular Day from the Year 1994 To 2004.”

1.2 Behavioral Finance:

1.2 a. Introduction to Behavioral Finance:

Behavioral Finance is an economic and scientific study on human behavior. It is a research done on social cognitive and emotional biases to understand economic decision and how they affect markets. The behavioral finance is mainly concerned with the human rationality and its practical aspects. This theory is a study of Human psychology and Economics. Behavioral finance is the upcoming study of how Human emotions and cognitive errors can cause disasters in ones financial affairs. In stock markets, behavioral finance can help to study situations in which we often hold on to stocks that crashes, sell stocks that show an uptrend, sometimes we overvalue stocks or jump in late and buy stocks that have peaked in a rally just before the price declines, we, the humans take desperate risks and gamble wildly when our stocks descend, we avoid taking the reasonable risk of buying promising stocks unless there is an absolutely 'assured' profit and never find our right price to buy and sell stocks.

In Economics we consider ourselves as rational beings but as the matter of fact we hardly use our rationality for taking decisions and depend on our emotional instincts for taking most of our major decisions.
1.2 b. Meaning of Behavioral Finance:

It is a field of finance that proposes psychology-based theories to explain stock market anomalies. Within behavioral finance, it is assumed that the information structure and the characteristics of market participants systematically influence individuals' investment decisions as well as market outcomes.

There have been many studies that have documented long-term historical phenomena in securities markets that contradict the efficient market hypothesis and cannot be captured plausibly in models based on perfect investor rationality. Behavioral finance attempts to fill the void.

Behavioral finance is closely related with the studies of Behavioral Economics, Efficient Market Hypothesis - EMH, Herd Instinct, Lemming, Market Psychology, Market Sentiment, Rally etc.

Behavioral finance is the new area of financial research that recognizes a psychological element in financial decision making, thus challenging traditional models that assume investors will always weigh risk/return factors rationally and act without bias.

For example, the human tendency to avoid admitting error, called fear of regret by psychologists, can cause an investor to hold a losing stock too long or sell a winner too soon. Similarly, investment choices are influenced positively or negatively by attitudes toward wealth. The success of contrarians and momentum strategies owes largely to psychological factors.

The premise of behavioral finance is that taking psychological factors into account can enhance the effectiveness of investment strategies. Daniel Kahneman was an important figure in the development of behavioral finance and economics and continues to write extensively in the field.
Behavioral finance and behavioral economics are closely related fields which apply scientific research on human and social cognitive and emotional biases to better understand economic decisions and how they affect market prices, returns and the allocation of resources. The fields are primarily concerned with the rationality, or lack thereof, of economic agents. Behavioral models typically integrate insights from psychology with neo-classical economic theory.

Behavioral analyses are mostly concerned with the effects of market decisions, but also those of public choice, another source of economic decisions with some similar biases.

1.2 c. History of Behavioral Finance:

During the classical period, economics had a close link with psychology. For example, Adam Smith wrote an important text describing psychological principles of individual behavior, The Theory of Moral Sentiments and Jeremy Bentham wrote extensively on the psychological underpinnings of utility. Economists began to distance themselves from psychology during the development of neo-classical economics as they sought to reshape the discipline as a natural science, with explanations of economic behavior deduced from assumptions about the nature of economic agents. The concept of homo economicus was developed and the psychology of this entity was fundamentally rational. Nevertheless, psychological explanations continued to inform the analysis of many important figures in the development of neo-classical economics such as Francis Edgeworth, Vilfredo Pareto, Irving Fisher and John Maynard Keynes.

Psychology had largely disappeared from economic discussions by the mid 20th century. A number of factors contributed to the resurgence of its use and the development of behavioral economics. Expected utility and discounted utility models began to gain wide acceptance which generated testable
hypotheses about decision making under uncertainty and inter temporal consumption respectively, and a number of observed and repeatable anomalies challenged these hypotheses. Furthermore, during the 1960s cognitive psychology began to describe the brain as an information processing device (in contrast to behaviorist models). Psychologists in this field such as Ward Edwards, Amos Tversky and Daniel Kahneman began to benchmark their cognitive models of decision making under risk and uncertainty against economic models of rational behavior.

Perhaps the most important paper in the development of the behavioral finance and economics fields was written by Kahneman and Tversky in 1979. This paper, 'Prospect theory: Decision Making Under Risk', used cognitive psychological techniques to explain a number of documented anomalies in rational economic decision making. Further milestones in the development of the field include a well attended and diverse conference at the University of Chicago (see Hogarth & Reder, 1987), a special 1997 edition of the respected Quarterly Journal of Economics ('In Memory of Amos Tversky') devoted to the topic of behavioral economics and the award of the Nobel prize to Daniel Kahneman in 2002 'for having integrated insights from psychological research into economic science, especially concerning human judgment and decision-making under uncertainty.

Prospect theory is an example of generalized expected utility theory. Although not commonly included in discussions of the field of behavioral economics, generalized expected utility theory is similarly motivated by concerns about the descriptive inaccuracy of expected utility theory.

Behavioral economics has also been applied to problems of inter temporal choice. The most prominent idea is that of hyperbolic discounting, in which a high rate of discount is used between the present and the near future, and a lower rate between the near future and the far future. This pattern of discounting is dynamically inconsistent (or time-inconsistent), and therefore
inconsistent with standard models of rational choice, since the rate of discount between time t and t+1 will be low at time t-1, when t is the near future, but high at time t when t is the present and time t+1 the near future.

At the outset behavioral economics and finance theories were developed almost exclusively from experimental observations and survey responses, though in more recent times real world data has taken a more prominent position. MRI has also been used to determine which areas of the brain are active during various steps of economic decision making. Experiments simulating market situations such as stock market trading and auctions are seen as particularly useful as they can be used to isolate the effect of a particular bias upon behavior; observed market behavior can typically be explained in a number of ways, carefully designed experiments can help narrow the range of plausible explanations. Experiments are designed to be incentive compatible, with binding transactions involving real money the norm.

**Key observations**

There are three main themes in behavioral finance and economics (*Shefrin, 2002*):

- **Heuristics**: People often make decisions based on approximate rules of thumb, not strictly rational analyses.
- **Framing**: The way a problem or decision is presented to the decision maker will affect their action.
- **Market inefficiencies**: There are explanations for observed market outcomes that are contrary to rational expectations and market efficiency. These include mispricings, non-rational decision making, and return anomalies.

**Richard Thaler**, in particular, has written a long series of papers describing specific market anomalies from a behavioral perspective.
Market wide anomalies cannot generally be explained by individuals suffering from cognitive biases, as individual biases often do not have a large enough effect to change market prices and returns. In addition, individual biases could potentially cancel each other out. Cognitive biases have real anomalous effects only if there is a social contamination with a strong emotional content (collective greed or fear), leading to more widespread phenomena such as herding and groupthink. Behavioral finance and economics rests as much on social psychology as on individual psychology.

There are two exceptions to this general statement. First, it might be the case that enough individuals exhibit biased (ie. different from rational expectations) behavior that such behavior is the norm and this behavior would, then, have market wide effects. Further, some behavioral models explicitly demonstrate that a small but significant anomalous group can have market-wide effects (eg. Fehr and Schmidt, 1999).

Key observations made the behavioral finance literature include the lack of symmetry between decisions to acquire or keep resources, called colloquially the "bird in the bush" paradox, and the strong loss aversion or regret attached to any decision where some emotionally valued resources (e.g. a home) might be totally lost. Loss aversion appears to manifest itself in investor behavior as an unwillingness to sell shares or other equity, if doing so would force the trader to realise a nominal loss (Genesove & Mayer, 2001). It may also help explain why housing market prices do not adjust downwards to market clearing levels during periods of low demand.

Applying a version of prospect theory, Benartzi and Thaler (1995) claim to have solved the equity premium puzzle, something conventional finance models have been unable to do.
Presently, some researchers in Experimental finance use experimental method, e.g. creating an artificial market by some kind of simulation software to study people's decision-making process and behavior in financial markets.

**Behavioral finance models**

Some financial models used in money management and asset valuation use behavioral finance parameters. One of the examples relevant to our study is Thaler's model of price reactions to information, with three phases, under reaction - adjustment - overreaction, creating a price trend.

The characteristic of overreaction is that the average return of asset prices following a series of announcements of good news is lower than the average return following a series of bad announcements. In other words, overreaction occurs if the market reacts to strong to news that it subsequently needs to be compensated in the opposite direction. As a result, assets that were winners in the past should not be seen as an indication to invest in as their risk adjusted returns in the future are relatively low compared to stocks that were defined as losers in the past.

**Criticisms of behavioral finance**

Critics of behavioral finance, such as Eugene Fama, typically support the efficient market theory. They contend that behavioral finance is more a collection of anomalies than a true branch of finance and that these anomalies will eventually be priced out of the market or explained by appeal to market microstructure arguments. However, a distinction should be noted between individual biases and social biases; the former can be averaged out by the market, while the other can create feedback loops that drive the market further and further from the equilibrium of the "fair price".
A specific example of this criticism is found in some attempted explanations of the equity premium puzzle. It is argued that the puzzle simply arises due to entry barriers (both practical and psychological) which have traditionally impeded entry by individuals into the stock market, and that returns between stocks and bonds should stabilize as electronic resources open up the stock market to a greater number of traders (See Freeman, 2004 for a review). In reply, others contend that most personal investment funds are managed through superannuation funds, so the effect of these putative barriers to entry would be minimal. In addition, professional investors and fund managers seem to hold more bonds than one would expect given return differentials.

Researcher found study of behavioral finance and various models explained above to be of great help in understanding the psychology of investors’ i.e. both from traders and investor fraternity. The volatility of markets studied by researcher could not have been interpreted without the study of behavioral finance.

1.3 Justification for selection of the topic:

The cause of volatility is unclear. Is it the arrival of unexpected news which causes markets to move or is volatility caused by trading itself? It is quite plausible that volatility is caused by both news and trading but we don’t know for sure. Our research aims to take the base as theory of behavioral finance to study and know the psychology of the Indian stock market players. The topic selected will help us to know the following:

- Stock market is the most lucrative way people feel is to earn money & Thirty thousand crores of Indian currencies change hands on daily basis in all forms of share traded in the market. Does this large amount of exchange takes place by educated and knowledgeable traders and investors or does this volume take place only on mere guess work or intuitions?
- Why it has been seen that in the past many a times the market has fluctuated into a negative or positive territory to the extent of 6% and above on a given trading day due to which there is mayhem in the entire country.

- The People have lost heavily during such volatility; hence this study can be helpful to understand the reasons of Manipulations and Fluctuations in the Share Market and help to make guide lines for Indian stock market players.

- This study would help us to understand the volatile markets and get guidelines to behave rationally and patiently so as to reduce and minimize the losses to some extent.

1.4 **Hypothesis of Topic** :

The fluctuations in the stock market is highly influenced by

a) Political Statements  
b) Financial News  
c) Political and Financial Rumors

1.6 **Objective of study** : The study is undertaken with the following objectives:-

a) To understand the reasons of Manipulations and High Fluctuations in the share market.  
b) To understand the highly volatile markets and get guidelines for stock market players to behave rationally and patiently so as to reduce and minimize the losses to some extent.
1.5 Research methodology:

1.5 a) Library:
   
i) News Papers of last ten years (from 1994 to 2004) viz..
   - Times of India
   - Business Standard
   - Financial Express
   - Indian Express

   ii) Various Books and Magazines on Related topic.

   iii) Various websites

1.5 b) Observations:

   Graphs, Survey / Desk Research / Field work

1.5 c) Case study:

   The fluctuations of five companies which has heavy weightage in Nifty or Sensex. These five companies are from different sectors and they also happen to be the leading one in their respective areas. Let us see the names of these companies and their respective sectors. viz.

   - Tata Motors - Automobile Sector
   - Infosys - Information Technology Sector
   - Hindustan lever limited - FMCG Sector
   - Reliance Industries Limited - ONGC Sector
   - State Bank of India - Banking Sector.

   The study of these companies would help us to know the effects of news or rumors on different sectors in an economy. It should also be noted that these companies are the top performing companies in their relative sectors.
1.5 d) Interviews:

The interviews no doubt have a great role to achieve the aim of our study. Hence to know the Indian psychology interviews have been conducted and questionnaires are collected from

- Stock Brokers and Sub Brokers
- Day Traders
- Investors (short term and long term investor)
- Views have been taken from various experts in the field of finance.

1.6 Limitation of the study: Researchers main study is based on the common dates of both BSE and NSE. Hence the following uncommon dates of BSE – Sensex and NSE – Nifty have been ignored for the reason that the study would be very vast and this topic should be taken later on for study.

The uncommon dates where the volatility was higher than 6% are:-

*Uncommon BSE Dates*

3.5.2000  
25.7.2000  
8.11.2001  
22.1.2004

*Uncommon NSE DATES*

28-10-1997  
29-10-1997  
3.01.2000