Chapter 1

Introduction

1.1 Background

In today’s economy, money holds a significant role in one’s life as in order to trounce the difficulties in future it is necessary to invest money. Investment is referred to as the sacrifice of present consumption and investing that saved money in some financial product with an expectation of earning higher returns in the future. But the accessibility to large amount of information creates a lot of confusion among the individuals, moreover it is very time consuming as well since the investors are many a times not capable of processing the available information. In addition to that, it is also necessary to have a sound knowledge of the existing investment options so as to arrive at good investment decision. Nowadays, numerous investment avenues are available with differing risk-return levels, differing liquidity and marketability. An investor has to pick an appropriate investment avenue that satisfies his particular need and risk taking appetite. The selection of an investment avenue is influenced by numerous factors. For example, while taking decision regarding investment in risky assets factors like gender, age, income, marital status and educational differences enacts a leading role as the person falling in one category might have different viewpoint and inclinations from their counterparts. The budding investment situation evidently uncovers that there is a transformation in the likings of investors regarding financial instruments. During 80s and 90s variety of investment avenues have been pioneered and embraced which was apparent from the fact that investors have shifted their money from conventional investment options towards equity and debt linked
Financial markets are the pillar of every economy. The flourishing Indian financial market contributes a lot in uplifting Indian economy. The capital market is a mechanism which helps industries, government and financial institutions in raising funds and plays an important role in the development of the economy. It carries out critical job of transforming households and organizational savings into investment and leads to the conception of numerous financial assets. Stock market - a segment of the capital market, is a platform which provides opportunities for buying and selling of shares, mutual funds and many more financial products. A healthy stock market is necessary for providing favorable environment for the economic growth of the country. The stock markets help in bridging the gap between savers and investors and in generating the prospects to put the hard earned savings in resourceful avenues. It apportions limited savings to the industries that helps them in improving their performance, the proof of which can be seen in their rapidly rising stock prices. Moreover, the availability of so many income generating securities encourages the people to spend less and invest their money in highly liquid and profitable securities. The stock market helps in integrating the worldwide economies through the incursion of capital in the form of Foreign Portfolio Investment (FPI) and Foreign Institutional Investment (FIIs). Financial markets worldwide are experiencing extreme, exceptional and expeditious changes. Besides, technology has also transformed the system and the availability of amass information has triggered incredible changes in the way the worldwide markets has been functioning.

Indian capital market is one of the swiftest developing markets in the world. It has matured remarkably during the recent past in sync with the changing global financial markets. Indian stock market is one of the oldest stock markets which was established
in 1875. The first share trading organization in India was Native Share and Stock Broker Association which is now known as Bombay Stock Exchange (BSE). SENSEX, BSE India benchmark index, is India’s first stock market index which is traced globally. SENSEX comprises 30 most volatile stocks from 12 diversified sectors. In the past during the initial years of trading investors used to gather at trading floor to initiate a transaction. But, with the passage of time, numerous scams and lack of innovative technology called for the urgent need of starting a new and better exchange which led to the establishment of National Stock Exchange (NSE). NSE is now counted as one of most advanced exchanges dealing in specific stock and exchange futures and having more than 50000 trading stations. In 1996, National Stock Exchange initiated S&P CNX Nifty comprising 50 volatile stocks from 25 diverse sectors and from year 2000 onwards, it has also opened its gate for online trading in stocks. At present, with the advancement of information technology, majority of the transactions are performed electronically which has resulted in paperless stock markets.

Capital market encompasses two sectors - Primary and Secondary market. Primary market deals with the issue of new securities (also called as initial public offerings- IPO) and further trading of all these securities takes place in secondary market. The primary market is the key medium which helps in mobilizing savings from the households to the companies straightly for investment purposes. It provides a platform that enhances industrial and financial activities by supplying scarce funds to the industries and the government. It introduces fresh securities in the market which help in increasing the volatility and widening the base of secondary market.

On the other hand, secondary market provides liquidity in stocks investment and mirrors the overall health of the economy. Industries generally raise two types of
funds from capital market in the form of either Equity or Debt. Equity capital is considered as a part of net worth whereas Debt reflects the liability of the business towards outside party. Moreover, the fund borrowed by way of equity is more preferred by investors as well as businesses as compared to that of Debt. This is because of the reason that if business firms manage to raise considerable amount of equity capital through IPO, it helps them in approaching banks for long term funding.

The Indian stock market has seen extraordinary jubilation from the early 90s and has too witnessed precarious admiration from many years. Presently, there are 19 stock exchanges in India wherein NSE (National Stock Exchange) and BSE (Bombay Stock Exchange), having approximately 9600 companies listed, jointly contributes more than 99% of the total turnover of Indian Stock market. Victory of equity market entirely rest upon the trust of the investors as investors will invest in equities only if they observe that it has excessive profitability potentials. In stock market, two types of investors are seen, namely, retail investors (individual investors) and institutional investors. Institutional investors are big investors who invest with the help of Portfolio Managers. Portfolio Managers simply rearrange the financial assets in their portfolio, depending on their personal valuation of numerous stocks but they do not infuse the most desirable risky capital by forthcoming organizations for carrying out new business activities. Moreover, Foreign Institutional investors (FIIs) usually invest their money in any country just to purchase shares of the extremely profitable companies but they do not cater risk capital to the organizations rather it is the retail investors who caters risky capital. They offer risk capital, either in the form of investment in equity shares or by the way of investing in mutual funds and are accountable for market fluctuations for many decades.

An event that is described by various traditional finance theories as
“abnormality”, the base of the global economy were stirred by Sub-prime mortgage crisis 2008 that was initiated in USA and eventually resulted in slow down of worldwide economies. Numerous economists, prognosticators oppressing powerful positions in various government organizations and financial institutions were trapped unprepared by this and subsequent events like insolvencies and defaults occurred. Even with the crisis gaining pace, many of them were not competent to examine the intensity or degree of the same. Downfall of economists, and subsequently the theories they rely upon, on various incidents has brought forward the question: Do investors actually behave rationally? Or are they prone to various behavioral biases that lead to irrational decisions? The main concept that has governed finance was Efficient Market Hypothesis (EMH) which tells that investors behave rationally while taking investment decision. In other words, an investor is said to be rational when he reframes his views immediately as soon as the new information comes in the market and makes preferences that are up to the standards. But there are some investors who overlook the fundamental or do not have the appropriate knowledge to implement the available information and tend to take irrational decisions. They took a decision which is in tone with their risk taking capacity. Moreover, majority of the investors feel insecure in handling their stock market investment as it is very complex for an individual to identify the companies having good future prospects.

1.2 Theoretical Framework of the Study

The earlier days of the stock market indicates that investor’s park their money in company’s shares or mutual funds for probably healthy motives but walk out of their holdings as soon as the market goes against them. They tend to sell the shares as and when they hear some bad news related to the stock and also become ready to pay high prices based on market rumors. This type of behavior is known as herd behavior
which was seen in the case of Dot com bubble. Additionally, investors also believe on word of mouth and feedbacks of their neighbors, friends and colleagues regarding which stocks to buy or sell. They also take recommendation from financial advisors and analysts. Henceforth, the decision making process of investors can be hypothesized as a complicated behavior which is affected by several rational as well as irrational factors leading to ineffective stock movement.

At the same time, academic and experimental work of two researchers Daniel Kahneman and Amos Tversky who provides their rich work to psychology in 1970s acted as a base and gave birth to a new concept known as Behavioral Finance in 1980s, which examines how investors are affected by their emotions like greed and fear while taking financial decisions. It primarily concentrates on how investors deduce and take action on plentiful available information to take investment decisions. One of the important reasons for the evolution of Behavioral Finance is the problems confronted by traditional finance theories. The main objective of Behavioral Finance is not to show that any of the traditional finance theory is outmoded, rather it attempts to combine psychology biases with traditional finance theories in an effort to establish a comprehensive model of human behavior. Behavioral finance pinpoints that humans are vulnerable to several behavioral biases that can turn out to be the major hurdle in their effort to get the best out of their wealth. Thus, it does not mean that eminent investors are not susceptible to these faults; it is merely that they realize the consequence of blending feelings in trading, and direct their intellect not to mingle emotions with investment decisions.

Kent et al. (2001) found in their study that individual investors while taking investment decision exhibit some common behavior and (a) they generally do not involve themselves in all investment avenues (b) they show evidence of loss-averse
behavior (c) they think that future performance of a share can be predicted by having information of their past performance (d) they trade too violently (e) they place their decisions by looking at the current state of affairs (status quo) (f) they do not create effective portfolios at all times and (g) their decisions are affected by past high or low of the respective shares. Behavioral models are looked as a new concept in share markets and it is necessary to understand these models in order to become familiar with the investment world.

Nowadays, it is very easy to invest in stock market as it does not require any specialized knowledge to buy or sell a stock. Modern technology has resulted in speedy trade between investors and it has become an upcoming trend to invest in share market. Consequently, investors take irrational decisions ignoring the true fundamental value of a stock. In present time, individual investors are doing trading too frequently which is detrimental to their profit motive. Although excessive trading might be beneficial for brokerage firm; but it is not lucrative for individual investors.

On the other side, the integration of worldwide markets has resulted in enlargement of market size and the number of investors’ since past two decades by offering a wide-ranging investment options. But it further complicates the investment decision making process as a wide variety of investment options are available to investors to choose from bonds to options. These financial products differ from each other in respect of risk and return level associated with them and investors prefer those investment options whose return and risk level is identical to their risk and return preference. Apart from this, investor’s knowledge of share market and their prior experience adds a lot to the evaluation of risk level in various investment options available. After framing risk tolerance the investors frame their probable returns from that respective investment option. Investor prefers to invest in those investment options which
proposes the return in commensurate with the risk level of those investment options.

Shifting our attention to India in 2008, SENSEX- highly popular and oldest benchmark index of Bombay Stock Exchange (BSE) signifying the free-float market value of 30 well-founded companies stocks from different sectors- had seen an all-time high of 20,873 in January 2008 even though the financial crisis was instigated in USA. But after one year, during March 2009, the index has slipped to 8,160, as soon as the financial crisis had extended to the global economies. Till November 2010, although the waves of the crisis have not leveled out totally, in the meantime SENSEX climbed on to a new high of 20,893. The whole investment environment began to flourish again then but a new crisisrupted this pace. This new crisis came in form of Sovereign debt crisis instigated in Europe and SENSEX started tumbling again.

1.3 Objectives of the Study

A single word that has governed the stock markets since 2008 has been “Volatility” and Indian stock market is no exception. Intense movements in stock prices as a result of anxiety and expectation have increased the complexity for a rational investor. Financial markets movements are so outrageous that it is changing its side from positive to negative returns and back just in the few weeks, days and months. Even, the globalization of financial markets has resulted in enlarging investor’s population since past two decades by catering to diverse investment options. Moreover, individual investor takes into account their investment requirements, purpose and limitation while taking investment decisions, but it is unlikely that decision proves to be profitable every time. Their outlook is shaped by numerous factors such as how to get rich instantly, dividend, past history of popular investors, online trading etc. A
deep knowledge of how investors usually react to market movements can assist financial companies in creating suitable strategies for their clients. Thus, it becomes necessary to understand the irrational behavior of investors than it has ever had.

In this context the immediate questions that come to our mind are: Are individual investor’s trading in Indian stock market are rational? If no, what are the factors that affect the decision making process of individual investors? Does the impact of various biases differ between the investors group having different characteristics? Do demographic factors have an effect on the financial decision making of investors? Do demographic factors play any role in determining which investor is more influenced by a particular bias?

1.3.1 Objectives

The present research first makes an attempt to understand various traditional finance theories that has been the base of Indian stock market for decades. At the outset, it explores how Indian stock market has evolved over a period of time and how it has shifted from a paper based stock market to a digital stock market. Then it explains how the availability of numerous financial products creates confusion in investor’s minds due to which they sometimes tend to ignore the fundamentals of the company and are likely to take faulty decisions. The objectives of the study are to examine whether the individual investor’s trading in Indian stock market are rational or not. The study also examines the impact of various behavioral biases on decision making process of investors. It focuses on seven behavioral biases: Loss Aversion, Regret Aversion, Overconfidence Bias, Herd Behavior, Representativeness Bias, Anchoring Bias and Cognitive Dissonance Bias. Another aspect of the research is to study the impact of these biases on different investor’s group. It also attempts to investigate the
impact of demographic factors in determining which investor group is more influenced by a particular bias.

With the above background, the specific objectives of the present research work are to examine the impact of various behavioral biases on investor’s group of differing characteristics, and to analyze which demographic factor is playing a major role in influencing an investor with a particular bias. The specific objectives are listed as follows:

1. To discuss the evolution of Indian share market;

2. To examine whether behavioral biases persists among investors.

3. To analyze which investor’s group (with different characteristics) is affected or unaffected by the behavioral biases.

4. To find out the level of association between various demographic variables and the factors influencing the investment decision making process.

Investor’s behavior and its impact on stock market have been studied by many researchers worldwide. Prominent studies include the work of Shiller (1990); Lakonishok et.al (1992); Kiyilar and Acar (2009); Thaler and Johnson (1990); Hirshleifer et.al (1998) and Barber and Odean (2000). The present study is an improvement over the existing studies. The study tries to investigate investor’s behavior in Indian context and our time frame includes those investors who have experienced speculative bubble 2008 which helps in clearly understanding the changes in their behavioral aspect.
1.4 Methodology, Time Frame and Data

The methodological approach of this research is based on the Discriminant function analysis and Binary Regression (Logit). Discriminant function analysis is a statistical tool which is used when the total sample is to be segregated into two or more mutually exclusive groups on the basis of some clearly defined independent variables and establishing a linear combination among them. In other words, it helps in determining which specific categorization or group variable associates on the basis of its attributes or features and which variables are the perfect predictors that contribute majorly in discriminating the groups. On the other hand, binary regression (Logistic regression), is used to predict a discrete outcome, such as group membership, from a set of variables that may be continuous, discrete, dichotomous, or a mix of any of these. Generally, the dependent or response variable is dichotomous, such as success/failure.

For the current research, primary data has been collected using structured questionnaire (sample copy attached in annexure as annexure 1) which were distributed in person to investors engaged in trading through brokerage houses and also as an online survey to those who choose to trade online. For this purpose, the data of 5,000 investors was collected from reputed brokerage houses and financial websites (of those who have uploaded their portfolio for tracking purpose). Questionnaires which were completely filled in all aspects were only taken for analysis purpose. 10% investors were picked randomly to ensure that sample size truly represents the whole population. The present research aims to collect data from diversified investors of distinct age, educational qualification, years of investment experience with differing attitudes in different market scenarios. Further, the questionnaire was prepared and made accessible to respondents in July 2015 to March
2016. Finally, 419 responses were received and amongst them 380 were chosen after rejection of incomplete questionnaires.

The data collected with the help of questionnaires were segregating in respective bias categories and evaluated using SPSS 21.0 in order to extract some relationship amongst them. Additionally, the responses of all the behavioral biases questions were combined and converted into binary variables and evaluated in response of demographic variables using STATA 13.0 to extricate some relationship amongst them. Chi-square test for independence was also used to test the various hypotheses and various charts and tables were made using Microsoft excel to present the demographic characteristics of the respondents like their age, gender, educational qualification, risk taking capacity, etc.

1.5 Contribution of the Study

A number of researches have been carried out worldwide that capture the investor’s behavior and its impact on their investment decision-making process. Same way, Indian is an emanating market and is also naked to behavioral biases which can be seen from various anomalous events experienced by it like dot.com bubble, financial crisis 2008, and many more. This can be due to the indifferent attitude of the stock market towards investor’s behavior that gave birth to these crises and washed away all the money of investors. Thus, it becomes even more important as well as interesting to study this irrational behavior of investors and that is why the present study is being carried out to have an insight of the share market inefficiencies caused by it. The present has been carried out to fill the following gaps:
(a) Most of the researches focused only on one category of investor but the present research studies the behavior of students, businessmen, housewives, salaried and others in entirety and its impact on stock market.

(b) The present study has also formed different investor’s group on distinct parameters to check which group is influenced by a respective bias.

(c) The present research also examines the impact of demographic factors in determining which investor group is more influenced by a particular bias which has been considered by other researchers.

1.6 Structure of the Research

The following research study is organized into eight chapters.

After introduction in the present chapter, Chapter 2 gives an overview on India’s Capital market-development and performance. This chapter gives a quick look at the development of Indian Capital market since liberalisation and globalisation. It also mentions how share markets are twirled from a market where everything was done on paper to paper free market. It cites the establishment of various Sectoral indexes in NSE and BSE and the performance since their inception.

Chapter 3 gives a theoretical framework of seven behavioral biases considered in the study. This chapter acquaints with various traditional financial theories and the grounds for the emergence of behavioral finance. Further, it also mentions the background and progression of behavioral finance and various popular theories based on individual behavior. It moves on with the discussion of how different behavioral biases, namely, loss aversion bias, regret aversion bias, overconfidence bias,
representativeness bias, cognitive dissonance bias, herd behavior and anchoring bias, affect the decision making process of individual investors.

A detailed review of existing literature is given in Chapter 4. It provides the summary of literature on individual investor’s investment behavior that is used as a starting point for primary research. This chapter also covers the work that has already been done by the researchers previously as well as the results and findings extricated from their study related to various behavioral biases. Recent literature has supported that risk-taking capacity of an investor is affected by previous financial gains and losses. Thus, after realizing financial gains, investors are ready to take more risk. From literature review it is also found that males are more overconfident and risk seeking as compared to females.

Chapter 5 features the data and research methodology used in empirical analysis for simplifying data in order to get desired results. Further it mentions the theoretical explanation of various statistical tools (discriminant analysis, chi-square) which is then followed by concrete analysis and results are shown in detail in next chapter.

Chapter 6 presents data analysis and evaluates the results of the study. This chapter has dual objectives: Firstly, the whole sample is divided in two investor’s group (less experienced and experienced investors) on the basis of their investment experience in stock market. After that, various statistical tools are used to check which investor group is more prone to which behavioral bias. And afterwards, the responses of behavioral biases were converted into binary variables to examine the impact of demographic factors in determining which investor group is more influenced by a particular bias.
Finally, Chapter 7 encapsulates the thesis and deduces the conclusions and recommendations of the present research. Additionally, it also presents the contribution of the present study and suggests some areas for future research. Behavioral finance is certainly an exposed opportunity and I contemplate that future theories should be focused on this research issue. It was found in the present study that both the investor’s group exhibit Herd behavior bias, overconfidence and representativeness bias in an equally likely manner; whereas for other variables, namely, loss aversion bias, regret aversion bias, anchoring bias and cognitive dissonance bias are exhibited by experienced investors more as compared to less experienced investors.