CHAPTER-1
INTRODUCTION

“... The rage for possessing them soon caught the middle classes of society, and merchants and shopkeepers, even of moderate means, began to vie with each other in the rarity of these flowers and the preposterous prices they paid for them.

One would suppose that there must have been some great virtue in this flower to have made it so valuable in the eyes of so prudent a people as the Dutch; but it has neither the beauty nor the perfume of the rose.”

- Charles Mackay, on the tulip mania of 1630’s

*Memoirs of Extraordinary Popular Delusions and the Madness of Crowds* (1841)

Investors’ irrationality is an inevitable reality as long as the markets themselves exist. Perhaps its earliest recorded evidence is given by [102]. In his book *Memoirs of Extraordinary Popular Delusions and the Madness of Crowds*, he mentions three instances that highlight the erratic behavior of crowds. These were the Dutch Tulip bubble (1630’s), the South Sea company bubble (1711-1720) and the Mississippi Company bubble (1719-1720). Among these, the Dutch Tulip bubble, popularly known as tulip mania is one of the most cited accounts. During the Dutch Golden Age, a new flower ‘Tulip’ was introduced in the Netherlands. The Dutch people became excited about this exotic variety and started investing their money in it. Gradually investments in tulips became a craze which pushed the prices higher and higher. At the peak of tulip mania, a single bulb sold for more than 10 times the annual income of a skilled worker. The market finally collapsed when people sensed that they have spent a greater part of their income on a flower bulb. They started to dispose of their tulip stocks as quickly as possible and the price plummeted, leading to heavy losses [102] [42] [142].

Instances like the tulip mania makes us ask a very basic question: are investors really rational? This question has been raised by various researchers in the past and relates to the dilemma that investor behavior does not conform to traditional financial theories. The traditional theories focus on a widely accepted approach of “fully rational agent” where decision making is
based solely on the available data and mathematically proven concepts. This approach was considered the backbone of financial decision making until its predictions did not confirm with actual market conditions. In an ideal scenario where this approach is applicable, the market is informationally efficient, i.e. the security prices would incorporate all the information available in the market. In this case, all the securities would be fairly priced. However, there have been evidences which propagate that ideal conditions can get violated in the real world in the form of market inefficiencies. Behavioral experts argue that investors are led by their sentiments and are prone to make cognitive errors. They may lack self control, be overconfident about their abilities, miscalibrate information, overreact or exhibit herd behavior [159]. These errors can lead to market inefficiencies and can get projected in the form of anomalies like speculative bubbles, overreaction and underreaction. Some of the recent examples of these inefficiencies are the dot-com bubble of the 1990’s [39] and the real estate bubble of 2006 [174]. The dot-com bubble referred to the internet boom during the period 1997 to 2000. The madness of crowds during this phase was so preposterous that companies could increase their share prices by adding just an “e-“ prefix or a “.com” suffix to their names. This bubble collapsed in 1999-2001 when many such companies failed. Even the most stable companies like Cisco and Amazon suffered during this collapse [107]. Similar to the dot-com bubble, increase in speculation in the United States housing market gave rise to the real estate bubble in early 2006 [142]. The speculative fever resulted in subprime mortgage and credit crisis which led to its burst in 2007, was one of the causes of global financial crisis of 2007-2009 [74]. The presence of these anomalies is a proof that the financial decision making process involves more than a calculative rational agent. Thus, the need for understanding such anomalies and shortcomings of human judgment involved with them became the precursor of behavioral finance.

The research on investor behavior dates long back since 1800’s. Experts like [102] and [94] gave the most influential work on the crowd mentality of individuals. [130] wrote *Psychology of the Stock Market*, which linked the market movements with sentiments and attitude of investors. The concepts like bounded rationality [147] cognitive dissonance [56], availability heuristic [168] representativeness, anchoring and adjustment [169] emerged. In 1979, psychologists Kahneman and Tversky introduced the prospect theory which is considered to be a
major breakthrough in this area. Post prospect theory, the research in this area started picking up pace. 1980’s and 90’s saw behavioral finance emerging as a separate field and the works of significant behavioral experts came into the picture. These include [163], [164], [9], [117], [118], [157], [141], [144], [5], [6], [7] and [40]. Behavioral Finance deals with the influence of psychology on the behavior of financial practitioners and its subsequent impact on stock markets [131]. [157] explains its concept in a more straightforward term by stating that “People in standard finance are rational. People in behavioral finance are normal”. This field tries to replace the rational *homo economicus* with a more realistic behavioral agent who is ruled by sentiments and is prone to make biased decisions. It signifies the role of psychological biases and their specific behavioral outcome in decision making. These biases are broadly categorized into heuristic driven and frame dependent biases [134]. The knowledge about behavioral biases provides a deeper insight into the underlying psychology of market participants. It enlightens us about the fact that because of our psychology, or more aptly our human nature, we are prone to make certain mistakes. These mistakes can prove to be very costly in financial markets and thus they can’t be ignored. Stock market crashes are one of the consequences of such ignorance. This makes behavioral finance an extremely relevant topic in today’s times. This field helps the financial practitioners in recognizing their own mistakes along with those of others, understanding the reasons behind these mistakes and avoiding them. It makes the practitioners more aware of the forces that guide them in their decision making, as well as those driving the market. Therefore, as the market environment becomes ever challenging, research in behavioral finance becomes the need of the hour.

A great deal of research has taken place in developed countries like U.S. and China. However, in Indian context, this area is still at a nascent stage and mostly untapped with a few contributions that are largely survey based [15], [32]. One of the probable reasons for this is that, in India there is a constraint on availability of investor specific data on public forums. However, using appropriate market proxies we can model the behavioral biases based on the previous researches of other countries. It is to be noted that, unlike most developed countries, India is a developing country where the majority of the population is young salaried class. Our national culture impacts our beliefs, perception and the understanding of financial markets. The cross
cultural differences separate our investment behavior from that of developed countries. It also impacts the entry mode of foreign markets like foreign direct investments (FDI’s). Indian stock markets were relatively closed until the liberalization of the financial sector in the 1990’s [69]. Post liberalization there was a substantial increase in the capital market activity. The Indian market allowed access to FII’s which accelerated the development of the market and its integration into the global financial system [89]. Since then the Indian markets, driven by rapid economic growth and fast growing information technology sector, rose sharply in 1990’s [93]. Thus, with larger number of players in the stock market, the Indian investors are now exposed to a variety of investment avenues than before. This had led to a shift in the investor preference from safer avenues to riskier ones. In recent times we have seen some great swings in the market movements. This involves the subprime crisis of 2008 which had a global impact on almost all the economies. During this time the BSE SENSEX (Bombay Stock Exchange Sensitive Index) touched an all time high, crossing the 21,000 mark before closing at 20,873 points on 8th January, 2008. It was immediately followed by a major crash of 1408.35 points on 21st January 2008. By 9th March 2009, SENSEX plummeted to a low of 8160 points. It then again reached a new level on 5th November 2010, with 20,893 points. Further, just when the markets were recovering from subprime crises, another calamity approached. It was the Sovereign debt crisis, which made a measurable impact on financial markets. There was a sharp decline in equity prices due to large net sales by FII’s and the SENSEX fell by 704 points on 22nd September, 2011 [14]. This turbulence in the stock markets has defied all the established pillars in finance. The market sentiments shifted from positive to negative and back again in the shortest time frames [161]. This has made it difficult for the Indian investors to behave rationally. In this context, it becomes extremely relevant to understand the behavior of Indian investors, which can be influenced by various behavioral biases. The comprehension and awareness of these biases separate successful investors from those who are not so successful. As [121], states that rational and successful investing is all about restraining and channelizing the emotions of greed and fear and understanding behavioral finance.

With this backdrop, this study aims to investigate the presence and impact of four such behavioral biases in the Indian context for the period 2006-2013. These are overconfidence,
optimism (pessimism), the disposition effect and herd behavior. It tries to unveil the influence of behavioral biases in investment decisions with the help of market trends and indicators. Moreover, it also identifies the situations and characteristics that make the Indian investors susceptible to certain biases. Our methodology involves both primary and secondary data that provide real time and historical insights of investor behavior. The impact of these biases on market indicators like return dispersion, risk premium, volatility and transaction volume is detected with the help of secondary data. It gives the temporal effect of behavioral biases in the Indian stock market. The primary data provide an insight into the investors’ psychology and the role of demographics and investor sophistication in the existence of biases. It illustrates the role of age, gender, annual income and education in influencing the mindset of investors. It also captures the effect of trading frequency and experience in curtailing the biases.

The subsequent chapters involve a discussion on the history and background of behavioral finance, literature review and the research objectives. It is followed by the description of the data and methodology, analysis of the results and conclusion of the study. Finally, the implications and future area of research are discussed.