PREFACE

When I joined teaching profession in 2005, my objective was to ‘create and disseminate knowledge through continuous two way learning, research and consultancy’. In order to fulfill one of the most important aspect of this statement i.e. research, I decided to join Ph.D. in January 2010. However, though I faced constraints, mainly on account of certain uncontrollable circumstances that one faces in life, my aspiration for this highest academic qualification did not wither. Though it took a little longer to start on my path, I could finally register myself at Sardar Patel University VallabhVidyanagar for the topic of “Investment Behaviour in Mutual Funds: Empirical Study in Gujarat with Specific Reference to Behavioural Finance”, under the guidance of Prof. H. J. Jani.

It has not been an easy journey, with my time divided between my family, my profession and my passion to pursue Ph.D. As a professor, I find that the present academic scenario is extremely competitive and demanding. In spite of the challenges, I managed to work things out and my Ph.D. progress reports during the last three years stands as testimony to it. As a contributing member of the institute and its vision, I set my priorities, followed my entire service obligation and never allowed the research work to overshadow my role and responsibilities.

Degree of ‘Doctor of Philosophy’ from Sardar Patel University was my ultimate choice in this regards as it is one of the premier university of the country and recognized across the nation. The present Ph.D. research work has been undertaken with a view to contribute to the institute’s vision, achieve my personal objective and work towards the development of the society as whole. I consider myself extremely fortunate and blessed to belong to this elite class of few.

One of the objectives of Ph.D. is to facilitate the research scholar’s teaching and research capabilities as well as improving substantive knowledge on specific areas of management. The present research work has definitely enhanced my research skills and experience to research.

The present thesis is based on extensive literature review carried out from variety of sources mainly books, journals, magazines and collection of e-resources generated during my participation in 32 Faculty Development Program in management organized by Indian Institute of Management Ahmedabad (IIMA). I have taken utmost care to quote the original source/author as either as a footnote or in the bibliography or at both the places. I express my sincere thanks to all the original
contributors for providing with a direction to work on. However, if inadvertently, I have forgotten to mention some sources, I express my apology to the original contributor of these sources.

I have tried for perfection and have left no stone unturned to prepare this thesis. I hope that the work presented here will be helpful to the scholars, researchers, organizational managers and other interested entities for their future work/decision in the area of investment behaviour in mutual fund in particular. I also sincerely hope that my present research experience paves way for achieving the third part of my objective, i.e. to undertake consultancy.

Chetna V Chapadia
ACKNOWLEDGEMENT

I firmly believe that it is Lord who has done this gigantic task as he is ‘Karta – The Doer’ of everything and whose wishes run supreme to any action happening in any sphere of universe. I certainly feel blessed by almighty.

In pursuing my Ph.D. and developing this thesis, I have received contributions, help, and support from my number of friends, associates, scholars, researchers, organizations and my students. Also, I wish to express my sincere thanks to my Guru in the form of guide Prof. (Dr.) H. J. Jani (Ex. Director G.H. Patel Post Graduate Institute of Management, MBA program, Sardar Patel University) who has been shaping my academic development and academic career. I have learnt and developed skills under his influence and so with all sincerity, I bow and prostrate to him and express my gratitude for his scholarly, inspiring, incessant efforts and patronage. In spite of his responsibilities as Pro Vice Chancellor of C.U. Shah University, he has helped me at all the odd times to accomplish this research successfully. His affectionate and guiding behaviour has actually paved way for my smooth, high-level academic interaction with a lot of learned people.

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I thank the chair FDP Prof. Vijaya Sherry Chand, IIMA for providing guidance during FDP 2010 at IIMA. I am thankful for their academic inputs which help me to strengthen and built on my research knowledge and aptitude. I thank all faculty members of FDP IIMA program for instruction and nurturing required skill for research.
I feel indebted to my respected parents for providing their continuous inspiration and motivation to complete this research work. I heartily thank my husband Mr. Rajesh Makwana, had been and considerate to me throughout my research work. I have felt the divine presence of the almighty whenever my daughter, Aarya has prayed for my success.

The incredible help offered by the rest of the persons whose names could not be mentioned in incomparable and deserve the highest degree of appreciation. I am highly obliged to all the persons who helped me visibly or invisibly for the successful completion of this Ph.D. work.

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Place: VallabhVidyanagar Chetna V.Chapadia
EXECUTIVE SUMMARY

Extreme volatility is the most prominent in financial market worldwide. Investors’ sentiments and psychological bias have been one of the key determinants of market movements. Behavioural Finance is an evolving field that studies how psychological factors affect investment behaviour.

Investment behaviour analysis is the use of behaviour principles. Usually it stands at the intersection of economic psychology and finance science. The market is determined by the people who cannot always be considered rational in their investment decisions. The perspective on how the financial market functions have shifted from the notional assumption about rationality of the investor and holistic explanation provided by EMH to new dimension of behavioural finance theory, which provides new models to understand the functioning of the market and participants, who are not fully rational. An attempt has been made to explain the behaviour and mental attitudes of the people in general that may affect decision making process of investment.

When fundamental assumption of traditional finance fails to explain rationality, Behaviour Finance offers alternative explanation of what motivates economic decision making of individual investor. Since, last three decades, prediction of investors’ rational behaviour has been challenged, leading to emergence of alternative schools of thought. Behavioural finance is one such school, which relaxes the assumption that investor consistently use expected utility theory. It draws motivation from psychology and behavioural economics, in an attempt to identify the behavioural determinants of investment choice.

There are many considerations and needs beyond risk and return that influence investor’s behaviour. Moreover, existing research attempts on mutual fund are of either financial performance of various schemes, or awareness and perception of mutual funds investors. This study tries to provide insight into real market mechanism as a whole and fundamental objective in particular. Finally, most critical issue is that the market participant cannot behave rationally always. They deviate from rationality and expected utility assumption while really making investment decisions.

This study focuses on examining biases in investors’ behaviour viz. Frame Dependence, Prospect Theory, Framing, Representativeness, Familiarity, Overconfidence, Disposition effect, etc. The objective is to draw from the literature on decision making as well as behavioural finance theory, and propose behavioural hypotheses that:
• Highlight the conditions in which investors’ behaviour can depart from the assumption of rationality:

• Examine the effect of frame dependence, prospect theory, and disposition effect and loss aversion attitude of investors.

• Examine the effect of these heuristics and biases, viz. Representativeness, Familiarity, Regret, Overconfidence, herding, and other biases, on investor’s investment behaviour.

Therefore, the present study attempts to integrate concepts and explain how emotions and cognitive errors influence investors’ behaviour and the decision-making process from a new insight of behavioural finance.

The purpose of this study is to examine and describe individual investor’s behaviour from a behavioural finance perspective in Gujarat. The work combines theoretical insight from the behavioural finance and social psychology literature to investigate the relative importance of the different needs of investors which they may strive to satisfy their financial needs. Subsequently, its effect on decision-making behaviour is examined.

This study attempts to find out factors that affect the mutual fund investor’s investment behaviour in Gujarat state. In addition, the effect of individual cognitive abilities, heuristics, behavioural biases, and other psychological biases of individual investors are studied from a behavioural finance perspective.

The concept of behavioural finance is essentially investor-oriented. The first chapter includes an introduction to Finance and Behavioural Finance which highlights the conceptual framework and evaluation of behavioural biases and heuristics. This framework provides insight into investment behaviour and cognitive errors in investment decisions.

The second chapter contains the mutual fund industry and its evolution in Indian financial markets. It highlights the growth, trend, and performance of the mutual fund industry. It also provides an overview of the regulatory framework of mutual funds and industry. It also includes the concepts and meaning of mutual fund schemes.

Third chapter consists of a literature review on behavioural finance with a general focus on behavioural biases and heuristics. Further, it brings out literature review specific to investment behavioural biases under study and encrypts the research gap. It also contains need, significance, and contribution of the present study. Extensive research studies have been carried out on various heuristics, behavioural biases, and psychological biases in foreign countries, but as far as India is concerned, such studies
are very limited in number. The Literature review has been taken as base for determining objectives of the study, construction of hypotheses, developing data collection tools, like questionnaire and selecting tools for analysis of the data.

For the present study, descriptive research design has been used. The study uses both primary and secondary data. Sampling method used to draw the samples was a convenience sampling method. The present study had been carried out by personal survey method through structured questionnaire. For the field study, sample was drawn from ten cities of Gujarat, chosen carefully for the understanding of investor’s characteristics. These cities are Ahmedabad, Ankleshwar, Bharuch, Bhavnagar, Rajkot, Bhuj, Surat, Vapi and Vadodara. The present study had been carried out by personal survey method through structured questionnaire.

The researcher mainly focused on the following broad objectives:

1. Primary Objective:
   To Study Investment behaviour of Individual Investor in Mutual Funds in Gujarat through Behavioural finance Approach

2. Secondary Objectives:
   - To study various available mutual funds in India.
   - To examine role and performance of mutual funds as an investment vehicle.
   - To study regulatory frame work of mutual fund industry in India.
   - To identify the factors that influence Mutual fund Investor’s investment behaviour.
   - To test the applicability of Behavioural Finance approach in investment decisions of Mutual Fund investors.

However, an attempt was made to test the hypotheses like level of awareness and demographic factors, presence of behavioural biases and its association with demographic factors, and identifying relationship between various elements of investments with other attributes, viz. risk, demographic factors, time period past returns and behavioural biases.

The data analysis and interpretations have been done with the help of tables, charts and graphs. The collected data has been analysed through statistical techniques like frequency distribution, test of significance, factor analysis, discriminant analysis and least significance difference etc. wherever applicable. Some of the major findings of the study are summarised as below:
• It was found that the investment horizon of the respondents indicates that majority (44.3%) of respondents have an investment horizon covering a period of 1-3 years, and (25.8%) preferred 3-5 years of investment period. It was found that, majority (77%) of respondents allocate 5% to 25% their savings. Whereas, 15% of respondents allocate less than 5%, and 8% of investors allocate more than 25% of savings to mutual funds investments.

• It has been observed from the responses that the ‘Equity Growth Schemes’ had obtained the highest total of 7,504 points, while the scheme ‘Index Funds’ had obtained the lowest total of 4,387 points. It was found that ‘Equity Growth Schemes’ are highly preferred, followed by ‘Tax Saving Schemes’ and ‘Balanced funds’ respectively. ‘Blue-Chip & Large cap funds’, ‘ELSS’ and ‘Liquid Funds’ are in average preference of respondents. Whereas, ‘Sector funds’ and ‘MNC/Gold funds’, and ‘Index Funds’ are the least preferred among respondents.

• It was observed that overall awareness about mutual fund investments among respondents in Gujarat is at a moderate level. It was also observed through survey that respondents had favourable perception about mutual fund investments. It was found that investors can be classified in three categories through multiple discriminant analysis. The classification results based on analysis sample indicate that $95 + 115 + 266 = 476$ out of $1,182 = 40.3\%$ of original grouped cases are correctly classified. This indicates a satisfactory validity. It was found that investors with experience of more than 3 years emphasize on regulatory benefits in MFs, whereas, investors with <1 year experience focused on comparative benefits of MFs to others.

• From analysis of factors that affect the decision making, it was also observed from Chi-Square test results that demographic factors, viz. Age, Education, and Occupation are significantly associated with ‘criteria uses to judge the performance’ of mutual funds. As P values in all cases are less than significant level (p-values< 0.05 & 0.01), led to rejection of null hypothesis. However, gender and income is not associated significantly.

• It was observed that the most significant factors that influence the choice of schemes are growth perspective, dividend or interest payment, reputation of fund manager and mutual fund past performance. It was found from data analysis that, selection of mutual fund is significantly associated with demographic factors viz. age, income, education and occupation, except gender of respondents.

• The analysis of 19 factors that influence investment behaviour in mutual funds was carried out through factor analysis. This analysis suggested six important
factors (Biases). The six factors so extracted are Familiarity and Domestic bias, Representativeness -Blue chip fallacy bias and SAB, Optimism Bias, Mental Accounting bias, Representativeness bias and Overconfidence and Aversion to ambiguity bias.

- The Discriminant analysis was performed using investment period (short term, medium term and long term investors) as discriminant function D. The two discriminant equations were found for behavioural biases through discriminant analysis. If the function value (Y₁) is near to 0.24, then the respondent will be classified as having high experience (>3 Years). Respondent will be classified as having medium and low experienced if function value (Y₁) is near to – 0.193 and – 0.08 respectively.

- This study provides the evidence that 56% of investors are supporting frame dependence argument, as well as they are statistically significant. It was observed that, 64% support the disposition effect and loss aversion. In the analysis of Chi-Square test of association between disposition effect (selling) and demographic factors, it was found that there is significant association between disposition effect and demographic factors viz. Age, income and education, except gender.

- The study provides evidence of mental accounting bias in investment behaviour, as supported by 66% of respondents. Around 48% of investors’ investment choices were differing from each other for two sources of income. Null hypothesis was rejected (p-value<0.05), indicating the mental accounting bias.

- It provided the evidence that 66% of investors depicted overconfidence bias in their behaviour. There existed a statistically significant association between demographic factors i.e. education and overconfidence bias, but there was no association between genders, age and income with overconfidence bias of respondents. This result was also consistent with results of judgment about skills that depicted the overconfidence bias among investors, as 72% of respondents had rated themselves as good driver.

- It was found that people try to avoid the pain of regret by shifting the responsibility to other reference point, as 87% respondents under study supported the self-attribution bias, that poor result is due to others reasons. Result suggested that in case of loss, there were only 13% who said it was their own mistake, while in case of profit/good that ratio increased to 30% to 40%, who said it was their capability or luck. This result supports the self-attribution bias of investor’s behaviour. It was confirmed that, there exists statistically
significant association between demographic factors i.e. age group and income and ‘self-attribution bias’.

- Total 63% of respondents validated buying directly or indirectly. So, it maybe concluded that this observation supports the herding bias in investment behaviour, as they wanted to be part of group decision.
- Through ANOVA analysis, it was found that over confidence bias in the opinion of respondents across age groups did not vary across all variables. As p-value < 0.05 indicated that, null hypothesis could not be rejected for framing, SAB (self-attribution bias), and CD (cognitive dissonance) bias as well as in Shadow of past bias across all age group.
- The mean scores of respondents with different income groups statistically differs (p-value < 0.05). Null hypothesis is rejected for representativeness- law of small number and extrapolation of past bias across all income groups of respondents. It was also observed that, the opinion of respondents across income groups do not vary in all statements (p-value>0.05). It can be inferred that in case of framing and SAB, respondents have alike opinion about the performance for the next period.
- Thus, it may be concluded that the study provides evidence supporting the presence of representativeness, familiarity, overconfidence, SAB, extrapolation of past, herding and other biases in investors behaviour. This suggests that their behaviour is heuristic driven and affected by behavioural biases. It may be concluded from analysis and findings that, investment behaviour of mutual fund investors is not fully rational, but they depart from the assumption of rationality.
- An empirical study on individual investors’ preferences and their behaviour, in this thesis, provided insight about heuristics and behavioural biases. This thesis has suggested that investors’ behaviour in mutual funds investment is not fully rational, but behavioural biased. This information provides meaningful insight into development, marketing and management of various schemes for AMCs. This can suggest some remedy to investors to minimize errors in investment decision through understanding of their own biases and psychological limits. Continued investigation into the influence of these behavioural biases on investment behaviour is suggested.

Key words: Behavioural Bias, Heuristics, Representativeness Bias, Overconfidence Bias, Frame Dependence, Disposition Effect, Mental Accounting, Investment Behaviour and Mutual Funds.