

A STUDY ON BEHAVIORAL FINANCE IN INVESTMENT DECISIONS OF INVESTORS IN AHMEDABAD

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ABSTRACT: Behavioral financing is an evolving field that studies how psychological factors affect decision taking under uncertain conditions. Behavioral finance is one of the important topic for us to know about the mindsets of the people about how they think of various things when they invest in various investment avenues. Through this research we came to know about the mentality of the people while they invest in various investment avenues. I.e. what do they think while investing. This paper seeks to find out the major influence of certain behavioral finance concepts such as overconfidence, perception, Representative, anchoring cognitive Dissonance, Regret Aversion, narrow framing and mental accounting on the decision-making process of individual investors in stock market. We conducted a primary research by framing a structured questionnaire and by collecting sample of 181 investors of Ahmedabad. The primary objective was to know effects of behavioral financing on investors and to study the impact and relevance of behavioral financing in investment decision of investors. Whereas secondary objective of our study was to know factors influencing the investors while investing and to study the concepts of behavioral financing and various theories related to it.

Keywords: Behavioral finance, psychological factors, mental accounting

INTRODUCTION TO THE TOPIC

Field of finance is basically about decision making as to investment decision, working capital decision, dividend decision and fund allocation decision whereas field of economics is about decision making as to what to produce, how to produce and for whom to produce. In the same way, the emerging field of behavioral finance also deals with the complex activity of decision making. Though the fields of economics and finance have contributed many theories over the years, it could not explain why people sometimes take irrational financial decision.

There are studies in the field of finance which gives us theories with explanation and proofs about how market operates and how the investors take their investment decisions. They explain the dynamics of investment and rules to apply for investment decision. The rules seem to be simple but investor's feels difficulty in applying those rules. Due to inefficiency in applying rules, investor's trade too much, buy or sell at wrong time, allow emotions to overrule logic and misjudge probabilities.

The finance field was reluctant to accept the view of psychologists who proposed the behavioral finance model. Indeed, the early proponents of behavioral finance were regarded as heretics. As the evidence of the influence of psychology and emotions on decisions became more convincing, behavioral finance has received greater acceptance. Although there is disagreement about when, how, and why psychology influences investment decisions, the award of 2002 Nobel Prize in economics to psychology Daniel Kahneman and experimental economist Vernon Smith is seen as a vindication of the field of behavioral finance.

TRADITIONAL FINANCE VS BEHAVIORAL FINANCE

The key difference between the traditional finance and behavioral finance are as follows:

TRADITIONAL FINANCE

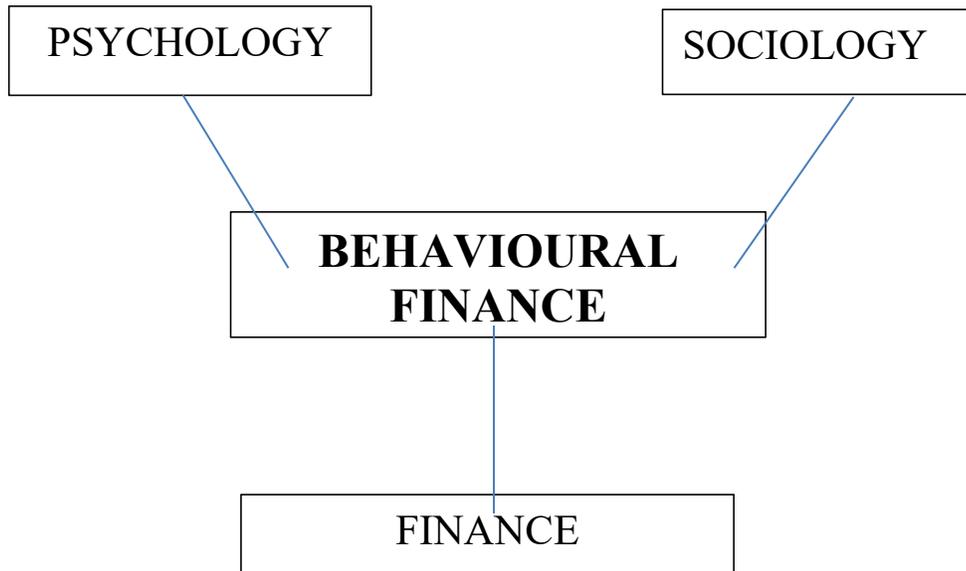
- Assumes that people process data approximately and correctly.
- Presupposes that people view all decisions through the transparent and objective lens of risk and return.
- Assumes that people are guided by reasons and logic and independent judgment.
- Argues that markets are efficient implying that the price of each security is an unbiased estimate of its intrinsic value.

BEHAVIORAL FINANCE

- It recognizes that people employ imperfect rules of thumb to process.
- It recognizes that emotions and heard instincts play an important role in influencing decisions.
- It suggests that the perceptions of risk and return are influenced by how decisions problem is framed.
- Argues that there is lack between market price and fundamental value are often caused by behavioral biases and errors, frame dependence effects, emotions and social influences.
- It arrives that prices are pushed by investors to unsustainable levels in both directions.

BEHAVIORAL FINANCE

Behavioral finance, a sub-field of behavioral economics, proposes psychology-based theories to explain stock market anomalies, such as severe rises or falls in stock price. The purpose is to identify and understand why people make certain financial choices. Within behavioral finance, it is assumed the information structure and the characteristics of market participants systematically influence individuals' investment decisions as well as market outcomes.



BEHAVIORAL FINANCE CONCEPTS

HEURISTIC DRIVEN BIASES

OVERCONFIDENCE

People tend to be overconfident and hence overestimate the accuracy of their forecasts. Overconfidence stems partly from the illusion of knowledge. The human mind is perhaps designed to extract as much information as possible from what is available, but may not be aware that the available information is not adequate to develop an accurate forecast in uncertain times.

ANCHORING

After forming an opinion an opinion, people are often unwilling to change it, even though they receive new information that is relevant. Suppose that investors have formed an opinion that A company has above average long term earnings prospect. Suddenly, A reports much lower earnings than expected.

FAMILIARITY

People are comfortable with things that are familiar to them. The human brain often uses the familiarity shortcut in choosing investments. Indeed, familiarity breeds investment. That is why people tend to invest more in the stocks of their Employer Company, local company and domestic companies.

CONFORMATION BIAS

People tend to overlook information that is contrary to their views in favour of information that confirms their views. Investors often only hear what they want to hear. They spend more time searching for reasons supporting their views and less time searching for reasons opposing their views.

INNUMERACY

People have difficulty with numbers. People confuse between nominal changes and real changes. Economists call this money illusion. People have difficulty in figuring out the true probabilities. Put differntly the odds are that they don't know what the odds are. People tend to pay more attention to big numbers and less weight to small figures.

FRAME DEPENDENCE**PROSPECT THEORY**

Proposed by Kahneman and Tversky, prospect theory, perhaps the most important concept of behavioral finance, provides an alternative description of how people frame and value a decision involving uncertainty. Under this description, utility does not depend on the level of the wealth as in standard traditional theory, but on changes in the wealth from the current level. The utility function is concave for gains.

MENTAL ACCOUNTING

Traditional finance holds that wealth in general and money in particular must be regarded as fungible and every financial decision should be based on a rational calculation of its effects on overall wealth position. In reality, however, people do not have the computational skills and will power to evaluate decision in terms of their impact on overall wealth.

NARROW FRAMING

Ideally investors should pay attention to changes in their total wealth. Narrow framing in the cross sectional sense means that investors tend to look at each investment separately rather than the portfolio in its reality. Hence they are more focused on price changes in individual stocks and less concerned about the behavior of the overall portfolio.

SHADOW OF THE PAST

After experiencing a gain, people are willing to make more risk. After winning money in a gamble, amateur gamblers somehow don't fully consider the winning as their own and are hence are tempted to risk it in further. Gamblers refer to this as the house money effect. After incurring a loss, people are less inclined to take risk. This is sometimes referred to as the snake bite effect. A loss is akin to a snake bite that makes a person more cautious.

EMOTIONAL AND SOCIAL INFLUENCES**EMOTIONAL EFFECT**

Emotions have a bearing on risk tolerance and risk tolerance influences portfolio selection. Investors have a variety of emotions as they consider alternatives, decide how much risk to take, watch their decisions play out, assess whether the initially strategy needs modification, and finally learn how far they have succeeded in achieving their financial objectives.

HEARD INSTINCTS / INFORMATION CASCADE

There is a natural desire on the part of human beings to be a part of a group. So people tend to herd together. Moving with the herd, however, magnifies the psychological biases. It induces one to decide on the feel of the herd rather than on rigorous independent analysis. This tendency is accentuated in the case of decision involving high uncertainty.

Literature Review

1. **(Nichlas Barberis, 2002)** In this research paper Behavioral finance argues that some financial phenomena can plausibly be understood using models in which some agents are not fully rational. The field has two building blocks: limits to arbitrage, which argues that it can be difficult for rational traders to undo the dislocations caused by less

rational traders; and psychology, which catalogues the kinds of deviations from full rationality we might expect to see.

2. **(BIRĂU)** This article presents a new approach in the analysis of capital markets, namely behavioral finance. Behavioral finance is the study of the influence of the psychological factors on financial markets evolution.
3. **(Andrea Masini, 2012)** Investments in renewable energy (RE) technologies are regarded with increasing interest as an effective means to stimulate growth and accelerate the recovery from the recent financial crisis.
4. **(Mangee, 2017)** This article provides econometric evidence on the importance of psychological considerations for aggregate stock price fluctuations. To this end, a novel measure of stock market sentiment, dubbed the Net Psychology Index (NPI), based on information contained in *Bloomberg News's* end-of-the-day stock market reports, is confronted with a battery of multivariate empirical analyses.
5. **(Kevin Brady, 2018)** Most large stock price shocks are not accompanied by publicly available information. Then, what other information do investors use to set prices? The authors find that investors rely on reference points and their private information signals.

RESEARCH OBJECTIVES

PRIMARY OBJECTIVE

- To study the impact and relevance of behavioral financing in investment decision of investors

SECONDARY OBJECTIVES:

- To study various factors influencing the investors while investment decisions.
- To analyze the behavior and psychology of investors
- To know the preference of people towards investing.

SCOPE OF STUDY

- Scope of study is limited to Ahmedabad city of India
- Scope includes the investors of all age groups.
- The study was limited to some theories only.

RESEARCH DESIGN

- The type of research design that we are using here is descriptive design because is used to describe characteristics of a population or phenomenon being studied.

DATA COLLECTION SOURCES

- **PRIMARY DATA:** Here in this research the following methods of data collection are used:- schedules, questionnaire, interview, observation methods.
- **SECONDARY DATA:** Internet, Books, Newspaper, Articles, magazines and blogs are some of the sources of secondary data collection that we have used for our research.

SAMPLING PLAN

- Population :- People of Ahmedabad
- Sampling frame :- People who invest
- Sampling method :- Convenience sampling
- Sampling size :- 181 people

EXPECTED CONTRIBUTION

- The relevance of behavioral financing and its importance in making investment decision can be known.
- The research will enrich the knowledge about traditional finance and different aspects of behavioral finance.
- The research can be beneficial to other researchers.

DATA ANALYSIS

Bi-VARIANT ANALYSIS

1. DO YOU THINK THAT YOU HAVE SUFFICIENT KNOWLEDGE ABOUT IT? * EDUCATION

Case Processing Summary

Do you think that you have sufficient knowledge about it? * Education Crosstabulation

Count

| | | Education | | | | | | Total |
|---|-----|----------------|----------|---------------|--------------|-----|--------|-------|
| | | under Graduate | graduate | Post Gradaute | Professional | PhD | Others | |
| Do you think that you have sufficient knowledge about it? | Yes | 7 | 46 | 47 | 10 | 3 | 3 | 116 |
| | No | 5 | 23 | 27 | 6 | 1 | 3 | 65 |
| Total | | 12 | 69 | 74 | 16 | 4 | 6 | 181 |

Out of total respondents, 58% of under graduate, 66% of graduate, 63% of post graduate and 62% of professional think that they have the sufficient knowlwdge about investing.

The level of education and the overconfidence bias was compared here to check whether there is any relationship between education level and overconfidence. It shows that the graduate people are the people with the highest level of overconfidence bias and it can be said that people who are educated has more overconfidence bias to predict the market compared to people who are less educated.

2. WHEN IT COMES TO DECISIONS RELATED TO INVESTMENTS, YOU RELY MORE ON YOUR INTUITIONS AND GUT FELLINGS* GENDER

when it comes to decisions related to investments, you rely more on your intuitions and gut fellings* gender Crosstabulation

Count

| | | gender | | Total |
|---|-----|--------|------|-------|
| | | Female | male | |
| when it comes to decisions related to investments, you rely more on your intuitions and gut fellings/ | Yes | 46 | 58 | 104 |
| | No | 29 | 48 | 77 |
| Total | | 75 | 106 | 181 |

Out of total respondents, 62% of female and 54% male rely on their intuition and gut feeling while making investment decision

The comparison was made with gender and emotional bias. So it can be said that female rely more on their intuition and gut feeling while making investment decision. Female gender is more prone to emotional bias as compared to males.

3. SUPPOSE YOU HAVE BOUGHT THE SHARES OF ABC LTD, THEN WILL YOU GIVE MORE IMPORTANCE TO THE POSITIVE NEWS RELATED WITH ABC LTD. * AGE

Suppose you have bought the shares of ABC Ltd, then will you give more importance to the positive news related with ABC Ltd. * Age Crosstabulation

Count

| | | Age | | | | | | Total |
|--|-----|-------|-------|-------|-------|-------|-----|-------|
| | | 18-25 | 25-35 | 35-45 | 45-55 | 55-65 | >65 | |
| Suppose you have bought the shares of ABC Ltd, then will you give more importance to the positive news | yes | 21 | 30 | 56 | 40 | 7 | 8 | 162 |
| | no | 1 | 5 | 4 | 7 | 0 | 2 | 19 |

| | | | | | | | |
|-----------------------|----|----|----|----|---|----|-----|
| related with ABC Ltd. | | | | | | | |
| Total | 22 | 35 | 60 | 47 | 7 | 10 | 181 |

Out of total respondents, 95% of people of the age 18-25, 85% of people of the age 25-35, 93% of people of the age 35-45, 85% of people of the age 45-55, 100% of people of the age 55-65 and 80% of people of the age more than 65 give more importance to the positive news related to their investments.

Here relationship between conformation bias and age was studied and it was concluded that there is no relationship between conformation bias and age of the investors. Conformation bias can occur to any investors irrelevance of age.

4. IF YOUR INVESTMENT IS SHOWING LOSS, WILL YOU HOLD IT FOR RECOVERING THE LOSS? * OCCUPATION ?

If your investment is showing loss, will you hold it for recovering the loss? * Occupation Crosstabulation

Count

| | | Occupation | | | | | Total |
|---|-----|------------|----------|---------------|---------|------------|-------|
| | | Service | Business | Self Employed | Retired | Home Maker | |
| If your investment is showing loss, will you hold it for recovering the loss? | yes | 59 | 23 | 16 | 6 | 20 | 124 |
| | no | 27 | 7 | 7 | 5 | 11 | 57 |
| Total | | 86 | 30 | 23 | 11 | 31 | 181 |

Out of total respondents, 67% of service, 76% of business , 70% of self-employed , 54% of retired and 64% of home makers will hold their loss showing investment to recover the losses.

Here the relationship between the trying to break even effect and occupation is studied. It can be analysed that business and self-employed people are most affected by trying to break even effect and retired people are least affected by it. Business and self-employed people are the people who take higher risk than other occupations.

HYPOTHESIS TESTING

H0: There is no influence of behavioral finance on investment decisions

H1: There is influence of behavioral finance on investment decisions

| THEORY | LEVEL OF PERCENTAGE |
|---------------------------------------|----------------------------|
| 1. Overconfidence | 64% |
| 2. Innumeracy bias | 38% |
| 3. Mental Accounting | 57% |
| 4. Narrow Framing | 23% |
| 5. Confidence Bias | 90% |
| 6. Prospect Theory | 70% |
| 7. Anchoring Theory | 48% |
| 8. Familiarity with investment | 67% |
| 9. Heard instinct/Information cascade | 57% |
| 10. The shadow of the past | 61% |
| 11. Trying to break even effect | 69% |
| 12. Emotional effect | 57% |

So from the above table it can be concluded that the theories of behavioral financing holds true.

H1:- is accepted

There is influence of behavioral financing n investment decisions on investors

MEAN AND SANDARD DEVIATION TABLE

| THEORY | QUESTION | MEAN | STD. DEVIATION |
|--------------------|---|-------------|-----------------------|
| Overconfiden ce | Do you think that you have sufficient knowledge about it? | 1.3591 | .48107 |
| Innumeracy | From the following two options which one will you choose? | 1.6298 | .49553 |

| | | | |
|-----------------------------------|--|--------|---------|
| Mental Accounting | Suppose you have invested Rs 1 lac in equity, Rs 1 lac in bond and if there is news in bond market then will it affect your buying and selling decision in equity? | 1.4309 | .49658 |
| Narrow Framing | You tend to react strongly on short term changes in price of investments? | 2.7017 | 1.04320 |
| Confirmation bias | Suppose you have bought the shares of ABC Ltd, then will you give more importance to the positive news related with ABC Ltd. | 1.1050 | .30737 |
| Prospect Theory | You have given Rs. 1 lakh and is asked to choose between two options. Which will you choose? | 1.1934 | .39604 |
| Prospect Theory | You have given Rs. 2 lakh and are asked to choose between two options. Which will you choose? | 1.6243 | .48564 |
| Anchoring | Do you prefer to keep holding onto investments even if there past performance is not very encouraging? | 1.5193 | .50101 |
| Familiarity Bias | From the following two options which would you prefer? | 1.3260 | .47004 |
| Heard instincts/Confirmation bias | Your friend has invested in some investment avenue for short term and have earned 60% return on investment will you invest in same investment alternative by his/her advice? | 1.5414 | .49966 |
| Heard instincts/Confirmation bias | Do other investor's decisions of buying and selling make impact on your investment decisions? | 1.5414 | .49966 |
| Heard instincts/Confirmation bias | Do the expert opinion/ survey/analyst forecasted in news/media have any impact on your buying and selling decisions | 1.2155 | .41229 |
| The shadow | You have invested in stock of ABC ltd. for some period of time and you have earned good amount of | 3.0387 | 1.32231 |

| | | | |
|----------------------------------|---|--------|--------|
| of the past | return in past, will you agree to invest in same stock on the basis of your past experience? | | |
| Trying to reach break even point | If your investment is showing loss, will you hold it for recovering the loss? | 1.3149 | .46577 |
| Emotional Bias | When it comes to decisions related to investments, you rely more on your intuitions and gut feelings/ | 1.4254 | .49578 |

- The mean of the overconfidence question is 1.3 which means more people have chosen yes to the answer and the people face overconfidence bias.
- In rating the attributes from 1 lowest to 5 highest the mean of financial advisor return past experience, familiarity, goals and research about investment is more than three which means people consider them or give importance to them before investing.
- The mean of the question of innumeracy is 1.6 which says that people have highly chosen bigger number than the calculative more return due to which the theory of innumeracy holds true.
- In the question of conformation bias the mean is 1.4 which states that the frequencies are equally distributed and people are more neutral about it.
- In the question of familiarity the mean is 1.3 which means that people choose familiarity of investment over more returns.
- In the question of conformation bias the mean is 1.5 which means that frequency is equally distributed and people are more neutral about it.
- The mean of the question of past experience is 3 which means people are neutral about the importance to the past experience.
- In the question of trying to reach break-even point the mean is 1.3 which tells that people are highly affected by the bias of trying to reach breakeven point.
- In the question of emotional bias the mean is 1.4 which tells that people are highly affected by the emotional bias while making an investment decision.

CONCLUSIONS

- The objective of this study was to check the relevance of the behavioral finance theories and if the average individual investor participating in the investments market of the Ahmedabad city is always rational or not.

- The focus was is on the behavioral biases namely: overconfidence, anchoring, familiarity, conformation bias, innumeracy, prospect theory, mantal accounting, narrow framing, shadow of past, emotional bias and information or heard instinct.
- Effects of the above biases on the decision making process of the investors of the Ahmedabad city was studied and analyzed. Data collection was done through questionnaire and 181 responses were obtained from individual investors.
- The study found out that investors are not rational and there is always the effects of above biases in more or less proportion on the decision making process of investors in the investments.

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