STUDY OF BEHAVIORAL FACTORS AFFECTING INDIVIDUAL INVESTMENT DECISION MAKING W.R.T. PUNJAB

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Abstract

The growing regimen of behavioral finance has paved the way for new research in this arena. Behavioral finance has unfolded new assumptions that stand in sharp contrast to the standard finance. The macro and micro behavioral finance talk about the inefficiencies of the financial markets and the bounded rationality of the investors. The present study brings into the forefront some common behavioral biases and the factors affecting the investment behavior of individual investors. The paper includes eight behavioral biases namely herding, home, anchoring, representative, overconfidence, gambler's fallacy, hindsight and confirmation bias. A sample of 500 respondents have been taken from three cities of Punjab i.e. Jalandhar, Amriotsar and Ludhiana. The College and University teachers serve as the respondents for this study. Factor Analysis has been applied for studying the factors affecting investment behavior of respondents while making investment decisions.

Keywords: Behavioral finance, Behavioral bias, investment behavior, investment decision

1. Introduction

The behavior of an investor is of utmost importance in the view of behavioral finance. Investors are normal human beings and therefore get affected by various emotions while investing. This fact raises the question on the assumptions of standard finance. Traditional finance assumes that investors are not blown away by emotions and they process the information in a correct manner (Subhash, 2013). On the contrary view, the behavioral academicians believe in the fact that human behavior should be considered in the process of investment decision making. (Riccarrdi, 2000). Behavioral finance combines the disciplines of psychology, economics and sociology and comes out with some concrete explanations about the market anomalies. There has been an ongoing discussion between the 'rationalists' and 'behaviorists' for explaining the markets and investors' move. Contemporary research reveals that the investors do not behave in a logical manner and their emotions are exhibited during the investment decision process. Behavior of an investor plays a vital role in arriving at investment decisions. Investment behavior refers to the process of how investors predict, analyze and review the information available in the market. Traditional finance talks about the rationality of investors but not only the behavioral theorists but even the financial economists have a perception of bounded rationality in humans. They consider the rationality of investors as an imperfect base for understanding the markets in general and investors in particular.

2. Overview of Behavioral finance

During the 1980s the concept of behavioral finance started gaining momentum. Professors like Richard Thaler in the University of Chicago, Robert Shiller in Yale University, Werner de Bondt in the University of Illinois, and Meir Statman and Hersh Shefrin at Santa Clara University, began to develop research relevant to the field of behavioral psychology. These researchers came out with a multitude of practical findings that were not consistent with the theories of traditional finance. In 2002, when Professor Daniel Kahneman of Princeton University was awarded the Nobel Prize in economic sciences, novel researches were undertaken in the subsequent years in the area of Behavioral finance.

According to Frankfurther and McGoun (2002), Behavioral finance, as a part of behavioral economics, is that branch of finance that, with the help of theories from other behavioral sciences, particularly psychology and sociology, tries to discover and explain phenomena inconsistent with the paradigm of expected utility of wealth and narrowly defined rational behavior.

3. Review of Literature

Isidore and Christie(2018) in the article entitled, 'A Behavioral Finance perspective of the stock market anamolies' explain the anamolous behavior of the stock market which was unexplained by the classical theories. Gill and Bajwa (2018) through 'A study on Behavioral Finance , Behavioral Biases and Investment decisions' found that behavioral biases do exist and studied its impact on individual investment decisions. Sullivon (2017) provides understanding of bubbles, Behavioral Finance and investor mentality and concludes that investors and professionals should arm themselves with as much information as possible and develop close bonds with their respective advisors. A deep knowledge of bubbles and behavioral finance is needed to understand the investor mentality. Deshmukh and Joseph (2016) in their study titled, 'Behavioral Finance: An introspection of Investors Psychology' revealed that factors like perception, motivation, incentive potential, intensity of cues play a major role while forming an intention to invest in mutual funds. The study was conducted using AMOS 21 software to assess the impact of behavioral factors over mutual fund investment decisions made by investors in Raipur city. Sharma (2016) conducted a study entitled 'Role of Behavioral Finance in the Financial Market' to highlight the shortcomings of traditional finance theories and a discussion on the significance of behavioral finance. He concluded that behavioral finance cannot be said to be a perfect discipline as it is not too old to be accepted as a theory. Afieroho and Erovie (2016) in their paper entitled, 'Emerging Theories and Biases in Behavioral Finance: A Cursory Review' explained various investment puzzles like excessive trading, under and over reaction, hypes and panics, equity premium and effect of future dividends on the market from behavioral finance perspective. Prosad et.al(2015)in the study , 'Behavioral biases of Indian investors: a survey of Delhi-NCR region' examined the presence the behavioral biases in Indian investors specifically, overconfidence, excessive optimism (pessimism), herd behavior and the disposition effect by making use of Chi square test and Cronbach Alpha. They found that Behavioral biases depend on investors' demographics as well as their trading sophistication and men are more overconfident than women with regard to their knowledge of Indian stock market. Gokhale and Horton (2015) investigated the effect of Toyota's product recall on overvaluation by making use of a composite error model and revealed how a strategy of investing in undervalued stocks can earn abnormal excess returns. Hammond (2015) in his study 'Behavioral finance: Its history and its future' presented a vast literature review of Behavioral Finance and concluded that the largest application of behavioral finance is investing in investment decision making and securities selection. He further suggested that the future application of Behavioral Finance is in the area of wealth and investment management. Hoffman et.al (2015) in the study entitled, 'How Investor Perceptions Drive Actual Trading and Risk Taking Behavior' found that investors with higher levels of return expectations are more likely to trade, investors with high risk tolerance possess high buy sell ratio and those with high risk perception possess low buy sell ratio. Malmendier and Geoffrey (2015) synthesized and assessed the burgeoning literature on CEO overconfidence in relation to investment, mergers, capital structure decisions and earnings management. Behavioral biases like CEO overconfidence matter both for the existing and potentially rational agents with whom they interact, transact, and contract in the marketplace. Bhatt and Chauhan (2014) in a study conducted with the aim to study behavioral finance as a new paradigm of finance came out with the conclusion that behavioral factors are important in financial markets because they influence the investors who make financial decisions. Shankar and Babu (2014) in the article titled, 'The impact of Behavioral finance on Stock markets' found that gender plays an important role in stock market investments and most of the investors are male. Using ANOVA it has been found that income plays an important role in decision making. Park and Sohn(2013)through an in depth literature survey with the help of journals and publication on Behavioral Finance concluded that though behavioral finance criticizes the Efficient Market Hypothesis theory it is too rash to abandon this persuasive theory. Latif et.al (2011) conducted a study and revealed that though there are three major types of market anomalies- Calendar, fundamental and technical, yet a lot of research is still needed to find out the causes of such anomalies. McGoun and Skubic (2010) in the research work, 'Beyond behavioral Finance' revealed that apart from behavioral finance there exists cognitive science which affects the human brain while making decisions. Pictures, images, memories and stories too affect the human brain to a great extent. Anderson (2010) in the study entitled, 'Detecting Anchoring in Financial Markets' established that anchoring is indeed involved in the decision making of market participants. Maheran

(2009) in an attempt to offer a brief survey of prior research and theory of behavioral finance concluded that investors make major systematic errors while making decisions and there is evidence that behavioral biases affect market prices substantially. Weiner (2009) in the paper entitled, 'Behavioral Finance –A three part model for client relationships explained the importance of understanding investors right brain actions through recognize-reflect-respond techniques. Filbeck et.al (2005) attempted to study the relationship between personality type and exante Expected Utility Theory risk tolerance using Factor Analysis. They inferred that individuals tend to act "normal" rather than rational while making investments and there is a nonlinear relation between personality and risk tolerance. Ricciardi (2005) conducted a study to provide a new starting point to a new scholar in the field of behavioral finance. In his research work he compiled and presented a large amount of literature and a list of dissertations that will be helpful for novice researchers. Ritter (2003) in his article of behavioral finance provided an insight into two building blocks of behavioral finance, cognitive psychology and limits to arbitrage. He established that it is difficult to find strategies that make big money, behavioral finance is in its infancy. Olsen (2001) aimed to identify whether Behavioral Finance is a science or not in his study, 'Behavioral Finance as Science: Implications From the research of Paul Slovic' found that risk is not objective, but is always subjective. The paper studied investment risk scientifically from a behavioral perspective. Thaler (1999) in his study, 'The End of Behavioral Finance' established that behavioral finance is no longer as controversial a subject as it once was.

4. Objective of the Study

The paper aims to have an insight into the field of behavioral finance. An attempt has been made to study the factors that influence the individual investors while making investment decisions.

5. Research Methodology

It is evident from the review of literature that individual investors get influenced by behavioral biases. The present study represents one such attempt in understanding the factors that influence the behavior of individual investors while making investment decisions. Factor analysis, as a statistical data, has been used for determining the factors influencing investor behavior.

Factor Analysis is one of the most used multivariate techniques in research. This has a wide application in social and behavioral sciences. Where there is an aim to find out something more latent or fundamental which brings a commonality in the research, factor analysis serves the purpose.

Survey Instrument- The questionnaire consisted of two sections. Section A included first 40 questions relating to behavioral biases; 8 behavioral biases were taken as a part of the current study namely Herding Bias, Home Bias, Anchoring Bias, Representative Bias, Overconfidence Bias, Gambler's fallacy Bias, Hindsight Bias and Confirmation Bias. This section based on behavioral biases was based on Five Point Likert Scale questions. All these biases served as independent variables of the study. Section B consisted of fifteen questions which studied the demographic characteristics of respondents of the present study. Age, Years of experience, Gender, Designation, Marital Status, Educational Qualification and Estimated Monthly salary. These were open ended questions unlike likert based questions in Section A.

Sample and Data-The present study consists of College and University teachers in the state of Punjab as respondents for data collection. Further, three cities of Punjab i.e. Jalandhar, Amritsar and Ludhiana, comprising a large number of colleges and universities have been utilized for collecting data. The choice of a college and university was indifferent as regards the type of institution (Public, Private, Semi Govt, Govt.) is concerned. The main reason for considering such teachers is that they are academic professionals and go for a large number of investment plans just like any other salaried class of individuals. Individuals while making investment decisions are more susceptible to emotions and information processing errors. Thus they are likely to exhibit irrational behavior, which is a commonly accepted behavior in human beings.

Data Collection- The sample size calculated turned out to be 384, so in order to cover up the respondent error and to ensure that sample size truly represents the whole population, a larger count of 500 respondents has been taken. A structured comprehensive questionnaire based on extensive literature review was circulated amongst

the respondents through online questionnaires majorly and few through personal meetings at their respective workplaces. Thanks to the ICT that allowed a smooth and convenient flow of the data collection process.

6. Results and Discussion

6.1 Reliability of Survey Instruments

Correlation analysis was used to test the criterion and construct validity. Changes were made to the questionnaire by removing, adding, or rephrasing some of the items. The Cronbach's Alpha method was used to assess the survey instrument's reliability. It is a measure of internal consistency, or how closely related a group of items is.

The following table reveals the results of Cronbach Alpha:

S.No.	Variable Name	No. of Items	Value of Cronbach Alpha
7.	Herding Bias	5	.918
2.	Home Bias	5	.944
3.	Anchoring Bias	5	.938
4.	Representative Bias	5	.818
5.	Overconfidence Bias	5	.811
6.	Gambler’s Fallacy Bias	5	.926
7.	Hindsight Bias	5	.930
8.	Confirmation Bias	5	.774

6.2 Factor Analysis

Factor Analysis was applied in order to study the factors affecting behavioral biases while making investment decisions. 8 independent variables namely Herding Bias, Home Bias, Anchoring Bias, Representative Bias, Overconfidence Bias, Gambler’s fallacy Bias, Hindsight Bias and Confirmation Bias were selected for the analysis.

There existed 5 factors representing each variable which were depicted by 40 statements. Kaiser- Meyer- Olkin measure of sampling adequacy (KMO) and Bartlett’s test was applied. Eigen value of 1 was taken to determine the amount of variance in each factor. KMO measure helps in testing the suitability of factor analysis. This measures between 0 and 1, and values closer to 1 are better. The results of KMO turned out to be .860 (acceptable limit is more than 0.6) and of course near to 1. Bartlett’s Test of Sphericity is a statistical test that measures overall significance of the correlations within a correlation matrix. It uses Chi Square distribution with p (p-1)/ 2 d.f., where p is the number of variables . Significance value of less than 0.05 is taken. The factor analysis showed a p-value of less than 0.05 indicating sufficient correlation amongst the factors of the study. The extraction values turned out to be good exhibiting high values. The Total Variance sheet displayed the fact that 72% is explained by the first 8 factors. Rotated component matrix revealed that the highest factor loading was in case of Home Bias and the lowest rested with Confirmatory Bias.

KMO and Bartlett's Tests		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.867
Bartlett's Test of Sphericity	Approx. Chi Square	14712.677
	df	780
	Sig.	.000

Source: SPSS Survey Output 2022

Determining the Number of Meaningful Components to Retain: Principal Component Method was utilized for determining each of the factors representing the variables. The PCA method suggests that the number of components extracted is equal to the number of variables being analyzed. Thereafter it is decided how many of these components are actually worthy of retaining for rotation and interpretation. All the factors representing behavioral biases were retained and rotated as a structured questionnaire was utilized for the study.

8. Conclusion

The results of factor analysis revealed that all the factors taken in the study influence the investment behavior of individuals. Also, the biases displayed significant values of Cronbach Alpha when reliability of all the factors of each of the biases was calculated. Thus, it can be inferred that all the factors taken in the study influence the investment decision of individual investors.

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