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A STUDY OF EXISTENCE OF OVERCONFIDENCE BIASES AMONG INVESTORS AND ITS IMPACT ON INVESTMENT DECISION

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ABSTRACT

In current scenario, behavioral finance plays an important role in investment decision making. Investment decision has become a complex decision with the availability of investment choices, accessibility of information and increased size of the market. There are various options or choices available for the investors in the market while taking investment decisions. Decision making means final selection of the best alternatives which are available for the investors in the market; some investment decision are easy and other investment decision are the complex overconfidence bias among the investors of Lucknow. Overconfidence variables were identified with extensive literature review as self-attribution, optimism, better than average effect, miscalibration, illusion of control, trading frequency and trading experience. To identify the influence of these variables in investor's decision making, structured questionnaire based on 5 point Likert Scale was used. With relevant statistical tools, it was found that investors are overconfident about their investment decisions, skills, knowledge, ability to choose stocks, control of portfolio, future investment plans and views about the stock market. and require the multiple approach. The purpose of this study is to identify the presence of

Key Words: Behavioral Finance, Biases, Investment Decision, Investors, Overconfidence,

INTRODUCTION

Decision making is part of routine life; people have to take variety of decisions, large or small, economic or non-economic. Few decisions are easy and appear straight forward, while others are complex and require a multi-step approach in making decisions. This study evaluates the existence and extent of behavioral biases more precisely overconfidence that investors have to face at the time of decision making. Behavioral bias is defined as a pattern of variation in judgment that occurs in particular situations, which may sometimes lead to perceptual alteration, inaccurate judgment, illogical interpretation, or what is largely called irrationality. Decision making is the mental or cognitive process that results in the selection of a course of action among several alternative situations. Investment decision making is a complex process that needs much more than money. Successful



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investing requires time, patience and discipline. For money and investment, people think that they are rational and all available information is embedded in their investment decisions. Our day to day activities are driven by our behavioral patterns; similarly our investment decisions are also driven by our behavioral patterns. Behavioral finance analyses and explains how investment decisions are influenced by investor's behavioral patterns and emotions. The field of behavioral finance has been growing since last twenty years because investors generally do not behave according to the assumptions of traditional finance theory. Behavioral Finance enlists well documented research of psychological traits that have replaced the rationality assumption. Many scholars have well researched and documented that the field of contemporary behavioral finance has direct roots with cognitive psychology. Cognitive psychology is the science of cognition or mental processes that drives human behavior. People make mistakes when they invest, because they are not capable of carrying out the optimization problems required by the principals of classic finance theory. Alternatively, they use rules of thumb or heuristics or biases to deal with the stream of information. Kahneman and

Riepe (1998) stated that it is very important to understand the investment decision making process as they have both financial and emotional consequences overtime. Investors use several heuristics and exhibit behavioral biases during the process of making investment decisions. The word "Bias" has been defined as "tendency towards a certain disposition or conclusion" (Wolman, 1973, p. 44). Sahi and Arora (2012) stated that the literature of behavioral finance considers bias as a systematic deviation from the norm, or an inclination for a particular judgment. Kahneman and Twersky (1974) brought into light how investors take decisions under uncertainty, the causes and effects of human error. Kahneman and Riepe (1998) introduced behavioral biases in three categories (1) biases of judgment, (2) errors of preference, and (3) biases associated with living with the consequences of decisions. Biases of judgment include overconfidence, optimism, hindsight, and overreaction to chance events. Several studies have been done to understand the psychology of investors and existence of biases in financial decision making in the western context, but very little study has been done to understand the psychology of Indian investors. Overconfidence has been



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well researched by western researchers hence; we propose to study the existence of overconfidence in the Indian scenario. (Pompian, 2006) defined Overconfidence as an unwarranted faith in one's intuitive reasoning, judgments, and cognitive abilities. It is a tendency of people to overestimate their abilities of prediction, precision of information and knowledge. Under overconfidence, investors assume that they have accurate information and are smarter. When investors are too certain about their decision, it is known as certainty overconfidence. When investors assign narrow confidence intervals to their investment predictions it is known as prediction overconfidence. Both certainty and prediction overconfidence can lead investment mistakes that causes harm to investor's portfolio. The purpose of this study is to identify the presence of overconfidence bias among the investors of Lucknow. Overconfidence variables were identified with extensive literature review as self-attribution, optimism, better than average effect, miscalibration, illusion of control, trading frequency and trading experience. To identify the influence of these variables in investor's decision making, structured questionnaire based on 5 point Likert Scale was used. With

relevant statistical tools, it was found that investors are overconfident about their investment decisions, skills, knowledge, and ability to choose stocks, control of portfolio, future investment plans and views about the stock market.

2. LITERATURE REVIEW

Behavioral finance studies how behavioral elements introduce variation in the individual's decision making process. In a study the researchers examine the cognitive biases and heuristics to which business students are subject which was achieved by administering a questionnaire and collecting empirical evidence about the own perceptions of bias of business students. The psychological fact known as bias and its presence in human decision making provide the additional insight on the subject of investor irrationality and broaden the ideals of rationality (Chira, Adams & Thornton, 2008). In broader term behavioral biases describes irrationality in decision making or a replicable pattern in perceptual distortion, illogical interpretation and inaccurate judgment. In a study the researcher examine the effects of behavioral biases on security market performance in Nigeria and find out the strong evidence that behavioral biases



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exists but not prevailing in the Nigeria security market because the results of study shows a weak negative relationship exists between behavioral biases and stock market performance in Nigeria. The study concludes that investors should be aware of the impact of behavioral biases on investment decision making process (Adetiloye, 2012).

2.1 OVERCONFIDENCE IN PSYCHOLOGY

Studies of calibration show that people overestimate their precision of knowledge (Fischhoff, Slovic, and Lichtenstein, 1977, Alpert and Raiffa, 1982); and has been observed in several fields. Fischhoff, Slovic, and Lichtenstein (1977) surveyed comprehensive literature on calibration about how people are often wrong when they are certain. They asked simple general knowledge questions for example (Is Quito the capital of Ecuador?); and then they were asked to give probability that their answers were correct. It was found that people overestimated their probability that they gave right answers for many questions. Knowledge has two aspects; what one believes to be true and how confident one is in that belief. It is very difficult to evaluate the validity of a degree of confidence

(Fischhoff, Slovic, and Lichtenstein, 1977; Lichtenstein, Fischhoff, and Phillips, 1982; Yates, 1990).

2.2 CHARACTERISTICS OF OVERCONFIDENCE

Several studies have been done where people have been asked to rate their personal abilities such as driving ability or athletic ability. It has been observed that people generally rate themselves better than average. This is known as better than average effect (Svenson 1981). Another aspect of overconfidence known as the illusion of control (Langer 1975) where people think that they have more control over events than it is true. It has been observed that overconfidence is the highest for difficult tasks where there is low predictability for forecasts and lack clear feedback. Similarly, selection of common stocks that would outperform the market is a difficult process as the feedback is noisy and predictability is very low.

2.3 SELF ATTRIBUTION

It has also been well documented that self-attribution leads to overconfidence. According to the theory of attribution (Bem, 1965), (Miller and Ross, 1975), people indulge self-enhancing attributions when they achieve success and self-



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protective attributions in case of failures. It is a tendency of people due to which they fail to learn from their mistakes. Therefore, the longevity of self-attribution leads to overconfidence. As Hastorf, Schneider, Polifka (1970) wrote “We are prone to attribute success to our own dispositions and failure to external forces.

Hence, the overconfident investor overweighs the private information signal and causes the stock to overreact.

2.4 OVERCONFIDENCE IN FINANCE

De Bondt and Thaler (1985) argued that “the key behavioral factor needed to understand the trading puzzle is overconfidence”. Another importance factor that leads to overconfidence is the trading volume. Researchers have identified overconfidence as powerful reason behind high levels of trading. Odean (1998) says that the overconfident investors trade more than the rational investors which lower their expected utilities. Hence, greater overconfidence leads to excessive trading and lower expected utility. Overconfidence not only increases the trading activity but also makes the investors too certain about their opinions. They ignore the opinions of others resulting in heterogeneity of investor beliefs. The study

made it evident that investors are confident and that affects financial markets. Overconfidence bias leads to increase in market depth, high trading volume and decrease in the expected utility of the traders who are overconfident. Daniel, Hirshleifer, and Subramanian (1998) gave a theory for investor overconfidence where changes in confidence result from self-attribution bias of investment outcomes. According to the theory, the investor overreact to private information signals and under react to public information signals. Hence, an overconfident investor is one who overestimates his precision of private information signal, but not for information signals publicly received by all. Odean (1999) further contributed that overconfident investors may trade even when their expected gains through trading are not enough to offset trading costs. In fact, even when trading costs are ignored, these investors actually lower their returns through trading. Barber and Odean (1999) highlighted the common mistakes made by investors of holding their losing investments disproportionately and selling the winners and trade excessively. They concluded that the tendency of being overconfident prompts the investors to trade excessively. Another remarkable



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research was conducted (Barber and Odean, 2001) that concluded that men are more overconfident by women. The theory predicted that men trade more excessively than women. They analyzed the investments of the data of over 35,000 households from 1991 to 1997, and concluded that men trade 45% more than women and trading reduces men's net returns by 2.65 percentage points a year as opposed to 1.72 percentage points for women. Barber and Odean (2000) concluded that individual investors holding common stocks pay a penalty for active trading. Overconfidence explains high trading volumes; they conducted a study on the accounts of 66,465 households during the period from 1991 to 1996, where their annual return was 11.4% and the market return was 17.9%. Gervais and Odean (2001) explained how a bias can create overconfident traders. According to the model, when a trader starts trading, he is not overconfident; during his first period of trading, his expected level of overconfidence increases before the event and then later it declines. Hence, the traders is highly overconfident during his early span of his career and later he his assessment becomes more realistic. Their model also predicts that more

inexperienced traders will be more overconfident than experienced traders. Montier (2002) Overconfidence and optimism are potent combination. Investors are not only overconfident but they also observe their outcomes and update their overconfidence ability in a biased manner. Bhandari and Deaves (2006) found out that investors are overconfident and explored their demographics. Overconfidence is partitioned into certainty and knowledge and hence it was found out that highly educated males who do not have high levels of knowledge are more prone to overconfidence. According to the literature, how quickly a trader reaches the peak of overconfidence and how he ultimately recognizes his true ability, depends upon several factors such as speed, frequency and clarity of feedback he receives. Glaser and Weber (2007) further tested the hypothesis of overconfidence models that higher the degree of miscalibration, the higher the trading volume of the respective investor. With extensive literature review of overconfidence, it indicates that too much trading, self-attribution, better than average effect, optimism, trading experience, miscalibration and illusion of control are



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prominent characteristics of overconfident investors.

3. RESEARCH METHODOLOGY

3.1 OBJECTIVES OF THE STUDY

The purpose of the paper is to investigate the presence of overconfidence bias in the Indian investors. It further explores the factors that lead to overconfidence and the factors which are prominent in the behavior of the investors. Several western researchers have surveyed the existence of overconfidence in countries, but there is a large research gap in India. Due to limitations of time and cost, the survey is based on the investors of Lucknow.

3.2 DATA COLLECTION

The data has been collected with the help of structured questionnaire comprising two sections, Part A and Part B. To explore the behavioral biases such as overconfidence, Questionnaire, as a survey instrument has contributed to the research which has been analyzed with the help of statistical tools. (Sahi and Arora, 2012),(Prosad, Kapoor and Sengupta, 2015). We have surveyed 100 active investors who regularly trade and take their own decision. Part A comprises questions that classify respondents based on their demographic profiles such as their

age, income, occupation, trading experience, trading frequency, investment goals. Part B comprise scenario based questions which have been designed on the basis of 5 point Likert Scale ranging from 1 (Strongly Disagree) to 5 (Strongly agree). The respondents have been segregated on the basis of their demographic profile and trading experience. The major factors of demographics are like age, gender, education, occupation, annual income. Their trading behavior factors are like trading experience, trading frequency, trading preferences and goal of investment. (Barber and Odean, 2001, Hon-snrir et al., 2012, Prosad, Kapoor and Sengupta, 2015) The respondents were all active investors who had their own trading account and invested in equity. The maximum investors were male, out of 100 investors, 84 investors were male and 16 were females. The investor age group was majorly from the age 25-35 and 35 and 45 years with trading experience of 1-3 years and 3-5 years. Their demographic profile indicated that the investors were from both private and government sector and they generally invested in stocks when they had surplus funds available or it depends upon the market movements. The trading frequency



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of investors was active and also dependent upon the market movements.

3.3 SURVEY INSTRUMENT & STATISTICAL TOOL

Descriptive Research Statistics has been undertaken to investigate the existence of overconfidence bias with the help of structured questionnaire. The Part B consists of 13 scenario biased questions that judges the level of overconfidence of the investor which is based on Likert Scale ranging from 1 (strongly disagree) to 5 (strongly agree). The variables in Part B that have been included lead to overconfidence as per the literature review. The variables are self-attribution, knowledge, control over portfolio, ability to choose stocks, rationality rating, past performance, trading volume, optimism, holding of stocks, future investment plans, views about SENSEX and NSE. The test was conducted to check the reliability of the questionnaire with the help of Cronbach's Alpha, as shown in Table 1.

4. PROBLEM STATEMENT AND HYPOTHESES

The objective of the paper is to identify the overconfidence bias in the investors. The paper identifies that investor is not rational

and is under the influence of overconfidence during making investment decisions.

Ho: Overconfidence bias does not exist in Indian investors while taking investment decisions.

H1: Overconfidence bias exists in Indian investors while taking investment decisions.

5. ANALYSIS

To capture overconfidence, respondents were asked about their accuracy of knowledge about the Indian stock market, their ability to pick better stocks, past performances, and specific questions about Indian stock market. The respondents were asked that whether they give credit to their skills for investment successes. The investors take credit of their investment successes and blame failures to the external factors are under the influence of self-attribution. The investors who consider themselves as a rational investor exhibit better than average effect. Investors were asked about their ability to have full control on their portfolio; the respondents who think that their control their portfolio effectively exhibit illusion of control under overconfidence bias. The influence of optimism was judged by the questions



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related to future performance of indexes such as SENSEX and NSE.

5.1 RELIABILITY

The reliability or the internal consistency of the questionnaire has been checked. It reveals that the questions are reliable related to overconfidence bias. The reliability has been achieved greater than the benchmark of 0.70 that makes it a preferable scale as shown in Table No. 1.

5.2 MOST PROMINENT FACTOR THAT LEADS TO OVERCONFIDENCE

Table no. 2 depicts the results of the descriptive statistics with mean and standard deviation for all the different factors. The existence of self-attribution among investors is very evident in the literature review. From the table no 3, it is very indicative that self-attribution is the most prominent factor that leads to overconfidence. Self-attribution has the highest mean of 4 with standard deviation of .862. Other prominent factors as per the table no. 3 are certainty of knowledge, ability to choose stocks, trading frequency, optimism and control, future investment plan, holding of stocks, rating as an investor, past trading, views about

SENSEX and NSE. The frequency of the variable self-attribution as shown in Table no. 4 shows generally investors agreed and strongly agreed about taking credit for their successes in trading.

6. CONCLUSIONS

The study aims to explore the existence of overconfidence bias among investors while taking investment decisions. The objective was achieved by using a structured questionnaire and collecting empirical data from active investors about their knowledge about market, past performances, ability, skills and views about future investment plans and stock markets. Questionnaire was distributed among 100 investors from which 84% were male and 16% were females. Descriptive statistics with mean and standard deviation was used to investigate the existence of overconfidence with the help of 13 factors. The study concludes that overconfidence exists in investors while taking investment decisions. It was evident that investors were overconfident about their knowledge, ability to pick stocks, holding of stocks, optimism, control over portfolio, and other factors. The investors take credit for their successes, assume to have full control over their portfolio, trade frequently, and are quite optimistic about Indian stock market.



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Self-attribution, knowledge about the stock market and movements, ability to pick stocks, trading frequency, optimism and control over portfolio came out to be the most prominent factors leading to overconfidence. It was clear from this study that self attribution (Daniel, Hirshleifer, and Subrahmanyam 1998) and miscalibration (Glaser and Weber 2007) influence investors during investment decision making and lead to excessive trading. The results of this study agree to the previous studies conducted on existence of overconfidence bias during investment decision making. There is great scope of further research in the studying the relationship between demographics and overconfidence.

7. RESULTS AND TABLES WITH LEGENDS (Refer Table No.1, 2, 3 Or 4)

8. MANAGERIAL IMPLICATIONS

The study is extremely relevant for investors and financial advisors that help them to understand psyche behind the investment decisions. One of the most common biases among investors is overconfidence. Investors can understand the variables of overconfidence that influence their investment decisions and where do they go wrong. The financial

advisors can gain insights about the client's psychology that would aid them to develop behaviorally modified portfolio.

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LIST OF TABLES:

Table no 1. Reliability statistics

Cronbach's Alpha	N of Items
.912	13

Results of Descriptive Statistics with mean and Standard Deviation

Table no. 2 Statistics

	Know ledge	Abil ity	Cont rol	Self Attribution	Trading Freque ncy	Future Invest ment	Past Tradin g	Sens ex	Holdin g of stocks	Rati ng	Past Perform ance	Opti misim	NSE
Valid	100	100	100	98	100	100	100	100	100	100	100	100	100
Missing	1	1	1	3	1	1	1	1	1	1	1	1	1
Mean	3.98	3.96	3.84	4.00	3.94	3.82	3.76	3.46	3.81	3.77	3.49	3.85	3.57
Std. Deviation	.791	.803	.972	.862	.886	1.038	.955	1.039	.761	.723	.916	.892	.935



Table no. 3 Descriptive Statistics

	N	Mean	Std. Deviation
Self Attribution	98	4.00	.862
Knowledge	100	3.98	.791
Ability	100	3.96	.803
Trading Frequency	100	3.94	.886
Optimism	100	3.85	.892
Control	100	3.84	.972
Future Investment	100	3.82	1.038
Holding of stocks	100	3.81	.761
Rating	100	3.77	.723
Past Trading	100	3.76	.955
NSE	100	3.57	.935
Past Performance	100	3.49	.916
SENSEX	100	3.46	1.039
Valid N (listwise)	98		



Table no. 4 Frequency of the variable Self Attribution

