

# A STUDY ON IMPACT OF INDIVIDUAL INVESTORS BEHAVIORAL FACTORS ON INVESTMENT DECISIONS AND PERFORMANCE

**Dr. RAKESH H M**

Associate Professor, Department of Business Administration, CRESTA College, Mysuru, India.

**Dr. NALINA K B**

Professor, Department of Management Studies, SJCE, JSS Science and Technology University, Mysuru, India.

**Dr. ARUNA ADARSH**

Associate Professor, JSS CMS, JSS Science and Technology University, Mysuru, India.

## Abstract

The biggest challenge of all time has been to comprehend and measure how investors behave during various states of capital market and see whether there is any heterogeneity amongst them when tested with their perception and demographic characteristics. Modern financial theories reaffirm that investors are biased, and they make irrational decisions. The apparent condition of the irrationality of retail individual investors is the result of various factors in the economy. The institutional investors, Foreign Institutional Investors, Qualified Institutional Buyers, and other wealthy investors influence the market to a great extent leaving the individual investors to behave irrationally when they make investment decisions. The study was carried out to help investors understand the impact of individual investor behavior on investment decisions and performance. The study concludes that Indian investors are biased, and their investment decisions are affected by their own biases. The results of this study can also be generalized for other similar economies around the world, as it is imperative and responsibility of regulators as well as policymakers to safeguard the interest of individual investors and contribute to the prosperity of capital markets.

**Keywords:** Behavioral Finance, Investment Performance, Investment Decisions, Indian Capital Market.

**Classification Codes:** G4, E22, G11, F21

## INTRODUCTION

In today's fast-paced world, individual investors have the opportunity to take control of their financial future. An individual investor possesses a unique advantage: the ability to tailor an investment strategy to reach personal goals, risk tolerance, and timeline. Unlike institutional investors, individual investors have the flexibility to act swiftly and seize opportunities as they arise, without being bound by complex bureaucratic processes.

When it comes to making financial decisions, we often assume that humans act rationally and make choices based on logical analysis. However, the field of behavioral finance challenges this assumption by recognizing that human behavior is influenced by psychological biases, emotions, and social factors. This introduction aims to explore the fascinating world of behavioral finance, shedding light on how behaviors and cognitive biases can impact investment decisions.

Behavioral finance acknowledges that investors are not always perfectly rational and objective. Instead, our decisions are often influenced by a range of cognitive biases, such as overconfidence, herd mentality, and loss aversion. These biases can lead to irrational

investment behaviors, resulting in suboptimal decision-making and potentially affecting investment returns.

In this research, we shall explore some of the key concepts and findings in behavioral finance. We will delve into the impact of behavioral impact on investment decisions and discuss how emotions, such as fear and greed, can sway investor behavior has impact investment performance. By recognizing these biases and understanding the psychological factors at play, investors can develop strategies to mitigate their influence and make more rational choices. Behavioral finance offers explanations for market anomalies, such as the disposition effect (the tendency to hold onto losing investments too long) and the momentum effect (the tendency for assets that have performed well to continue performing well). Understanding these anomalies can help investors identify potential opportunities and manage their portfolios more effectively.

Behavioral factors play a significant role in investment decisions, often influencing investors to deviate from rational and objective decision-making. The key behavioral factors that can impact investment decisions are cognitive biases, emotional influences, herd mentality, loss aversion, framing, and presentation effects.

Understanding these behavioral factors is crucial for investors as they can lead to suboptimal decision-making and affect long-term investment performance. By being aware of these biases and taking steps to mitigate their impact, investors can make more rational and objective investment decisions. Techniques such as setting clear investment goals, maintaining a diversified portfolio, and adhering to a disciplined investment strategy can help investors overcome the negative influences of behavioral factors and achieve their financial objectives.

Behavioral factors can have a significant impact on investment performance. Investors who are aware of and actively manage these factors tend to make more informed and rational decisions, potentially leading to better investment outcomes.

By understanding and managing behavioral factors, investors can enhance their investment performance. Techniques such as maintaining a long-term perspective, following a disciplined investment approach, diversifying portfolios, and regularly reviewing and rebalancing investments can help mitigate the negative impact of behavioral biases and improve the likelihood of achieving financial goals.

"Investors who purchase once the market is high and move once the market is down are over doubtless influenced by the herd mentality," Porter says. "This bias happens once people are influenced by their friends to pursue patterns, purchase things, and embrace bound behaviors, in spite of whether or not it is not to their greatest advantage. It's imperative to prevent and surprise why you're creating this monetary call, and hoping to see whether or not it lines up together with your monetary arrangement. Doing per se can go way in serving to make sure that the moves you're creating are literally directly for you, not for somebody else."

## LITERATURE REVIEW

Behavioral finance depends on gathering realities to the ineffectiveness of human basic leadership concerning distinctive monetary circumstances (Pompian, 2006). Scarcely any research has alluded behavioral finance to biases of heuristics (Brabazon, 2000; Parikh, 2011) and characterized biases as cognitive or emotional lines (Shane, 2005; Kristensen and Garling, 1997; Montier, 2002). Experts in behavioral finance trust that shareholders are more influenced by cognitive errors than behavioral biases (Jureviciene and Jermakova, 2012) and it additionally contends that investors are irrational and counter-intuitive decisions when they spend, invest and their decisions depend on feelings (Swell, 2007; Shefrin, 2000, Belsky and Gilovich, 1999; Fama, 1998).

The basic leadership under uncertainty under standard finance investors' basic leadership will pursue rules of probability, yet, according to Bayes' rule a great many people over-respond to sudden occasions (Bondt and Thaler, 1985). The winner/washout effect isn't ascribed to changes in risk according to CAPM beta. The profits of the loss-making and profit-making firms show inversion arrangements that are consistent with overreaction (Bondt and Thanler, 1987). The abnormality of behavioral finance theory is explained from the point of view of overreaction by Reedman (2005).

The shareholders are drawn from a large population for high portrayal to check the intuitions about the law of possibility (Kahneman and Tversky, 1971), and "representativeness" assumes a vital job in intuitive predictions made by investors (Kahneman and Tversky, 1972, 1973). Representativeness, availability, and anchoring are the three heuristic biases by the investors in different basic leadership circumstances and enhance their circumstances if there should arise an occurrence of uncertainty. Framing effect alludes to the manner by which a similar issue is settled in various ways and given to chiefs which may help the leader to examine how adages of rational choice do not hold and framing effect additionally influences the choice of investors (Tversky and Kahneman, 1981). The rule of dominance is disregarded because of the framing effect. The job of straightforwardness and framing effect are consistent with the concept of limited rationality (Tversky and Kahneman, 1986). The element of certainty effect is that the investors will have more weight on the results that are seen more than those of extensive probability (Kahneman and Tversky, 1979). Another imperative behavioral bias is mental accounting. It is the inclination among people to recognize/isolate their money into various accounts by considering different standards and will be dealt with distinctively leading to bias (Thaler, 2008). Thaler in the year 1999 composed an article the name "The Finish of behavioral finance" anticipated that not long from now, the term behavioral finance will be seen as a repetitive stage. Economists are trying to incorporate different behaviors "into their models as they see in this present reality. All things considered, to do generally would be irrational". Investors conjecture with overconfidence in development companies and would be interested to know good news about the market and ignore negative news (Solt and Statman, 1989). The investors will dependably think that they have better and adequate information that make smarter decisions (Ponpian, 2006; Shefrin, 2000).

## RESEARCH GAP

After analyzing the literature on investor’s behavioral factors on investment decisions and performance, the following research gaps have been identified.

- There is a desire to investigate the impact of gregarious and prospect theories so as to grasp the behavior of individual investors - William Coffie (2013)
- Individual retail investors are highly influenced by a larger number of psychological factors like loss aversion, mental accounting, and representativeness which need focused discussions - Jaya Mamta Prosad (2014)
- Most of the studies have been conducted in developed economies. There is little evidence available from emerging economies, especially from India. - Rene Christian Kumsta (2015) and Jaya Mamta Prosad (2014)

## RESEARCH METHODOLOGY

**Table 1**

<b>Type of Research</b>	Descriptive Research
<b>Type of Sampling Technique</b>	Non-Probability Sampling Technique
<b>Sampling Method</b>	Convenience Sampling Method
<b>Sample Frame</b>	Individual Investors in India
<b>Sample Size</b>	Respondents: 300
<b>Data and Data Source</b>	Primary Data: Questionnaire Secondary: Various reliable sources

## DATA ANALYSIS AND INTERPRETATION

**a. Table No. 2: Respondents Profile**

Demographic Characteristic	Options	Frequency	Percentage	Demographic Characteristic	Options	Frequency	Percentage
Gender	Male	218	72.67	Education Qualification	Class 12 or less	27	9
	Female	82	27.33		Degree	142	47.33
Age Group	20-35 Years	164	54.67		Post-Graduate	121	40.33
	36-45 Years	68	22.67		Doctoral Degree	10	3.33
	46-55 Years	40	13.33	Employment Type	Government Employee	37	12.33
	56 Years and above	28	9.33		Non-Government Employee	113	37.67
Marital Status	Married	178	59.33		Professional	63	21
	Single	122	40.67	Self Employed	87	29	

## b. Level of Investors Behavior during their Investment Decisions and Hypothesis Testing

The impact levels of behavioral variables on investment decisions are identified using the sample mean values of each variable. The variables, that meet the requirements of the above factor analysis and Cronbach’s Alpha test, are chosen to demonstrate scores. 5-point scales are used to measure impact levels of variables, mean values of these variables can decide impact levels on investment decision-making by considering the below rules;

The impact levels of behavioral variables on investment selections have been identified using the sample mean values of every variable. The variables that meet the needs of higher than correlational analysis and Cronbach’s test, square measure chosen to demonstrate scores. the five-point scale used to measure impact levels of variables; mean values of those variables will decide impact levels on investment higher cognitive process by considering the below rules;

- ✓ Mean value of less than 1 shows that factors have a very low impact on investment decision-making
- ✓ Mean values from 1 to 2 shows that factors have a low impact on investment decision-making
- ✓ Mean values from 2 to 3 shows that factors have a moderate impact on investment decision-making
- ✓ Mean values 3 to 4 shows that factors have a high impact on investment decision-making
- ✓ Mean values 4 to 5 shows that factors have a very high impact on investment decision making

**Table 3: Descriptive Statistics and Results of One-Sample Test**

Factors	Parameters	One-Sample Statistics		One-Sample Test			Accept/Reject Ho
		Mean	SD	t	df	Sig. (2-tailed)	
<b>Herding Behavior Items</b>	Other investors' decisions to trade stocks have an impact on your investment decisions	3.14	1.18	3.455	299	0.001	Null Hypothesis is rejected
	Your investment decision would impact other investors' decisions on the stock volume	3.28	1.09	2.999	299	0.003	
	Your investment decisions would be impacted by other investors' decisions to choose stock	3.69	1.08	5.812	299	0	
	Herding Behavioral Factor	3.55	1.12	6.712	299	0	
<b>Mental Accounting Behavior Items</b>	You tend to treat each factor of your investment portfolio separately	3.45	1.08	5.786	299	0	
	You ignore the association	3.76	1.02	5.125	299	0	

	between different investment alternatives					
	Your Spending on entertainment is affected by the next week's payments	3.23	1.34	7.234	299	0
	Your investment decisions made by mentally aggregating the investment options will result in higher returns	3.18	1.09	7.321	299	0
	Mental Accounting Behavioral Factor	3.56	1.17	6.541	299	0
<b>Regret Aversion Behavior Items</b>	You feel more sorrow in losing stocks after holding them for too long rather than selling winning stocks too soon	3.39	1.13	6.473	299	0
	You stay away from selling shares that have reduced their value and voluntarily sell shares that have improved their value	3.93	1.33	4.587	299	0
	You make a choice; you will be curious about what would have happened if had chosen differently	3.95	1.34	6.782	299	0
	You adopt a careful, analytical approach to making a decision takes too long	3.32	1.21	5.347	299	0
	Regret Aversion Behavioral Factor	3.56	1.17	6.021	299	0
<b>Market Factor Items</b>	You analyze the company's customer preference before you invest in their stocks	3.8	1.05	5.387	299	0
	You study the market	3.87	1.07	6.123	299	0

	fundamentals of stocks before making investments					
	You use the past trends of stocks under consideration for your investment	3.91	1.01	5.671	299	0
	Overall Market Factor	3.8	1.05	5.871	299	0
<b>Loss Aversion Factor Items</b>	You will be more risk-seeking if you get a prior gain	3.19	1.14	4.879	299	0
	You will be more risk-averse if you get a prior loss	3.25	1.09	8.723	299	0
	You are cautious about losses which show sudden changes in price or trading activity	3.51	1.04	7.723	299	0
	You usually invest in stocks that have past positive performance in trading	3.98	1.12	5.891	299	0
	You have the knowledge to invest your money in the capital market	3.08	1.17	5.812	299	0
	Overall Loss Aversion Factor	3.26	1.1	5.761	299	0
<b>Anchoring Factor Items</b>	You rely on your prior experiences in the market for your next investment decision	3.58	1.01	6.286	299	0
	You estimate the changes in stock prices based on current stock prices	3.54	1.09	6.236	299	0
	You like to gather a lot of new data to explore new opportunities that arise	3.97	1.23	5.781	299	0
	You build investment portfolios purely on quantitative	3.41	1.04	4.891	299	0



	analysis of risk and returns of individual assets within the portfolio without the influence of psychological factors					
	Overall Anchoring Factor	3.76	1.12	5.861	299	0
<b>Representativeness Factor Items</b>	You buy newly issued stock that rapidly rises in price due to high demand and avoid poorly performing stocks	3.34	1.13	4.962	299	0
	You use trend analysis for stocks that you like to invest in order to make investment decisions	3.56	1.17	6.287	299	0
	Overall Representativeness Factor	3.42	1.14	5.812	299	0
<b>Ability Bias</b>	You are capable of anticipating good or poor market returns at BSE/NSE	3.37	1.02	5.291	299	0
	You prefer to buy domestic company stocks than international stocks due to the availability of more accurate information	3.87	1.12	5.912	299	0
	You believe that skills and knowledge of the stock market will help to outperform the market	3.54	1.42	5.382	299	0
	Overall Ability Factor	3.45	1.23	5.782	299	0

- Overall herding behavior mean value is 3.55, which is more than three indicating that the investors are affected by this factor. The results of the same have been proved with the help of one sample test.
- The level of mental accounting bias has affected the investors at the time of their investment as the mean value for each of the mental accounting bias items is



more than three. Further, the level of herding behavior in the study, which affected the investors, is moderate as the mean value of the same is around three.

- The results of regret aversion bias have affected the investors at the time of their investment as the mean value for each of the regret aversion bias items is more than three. However, the overall regret aversion behavior mean value is 3.56, which is more than three indicating that the investors are affected by this factor. The analysis states that the investors are biased in terms of regret aversion behavior when they make investment decisions.
- Market behavior mean value is 3.80, which is more than three indicating that the investors are affected by this factor. P-value is less than 5% (0.05) hence null hypothesis is rejected at a 5% level of significance.
- The results show that there is a loss aversion bias that has affected the investors at the time of their investment as the mean value for each of the loss aversion bias items is more than three.
- Anchoring bias has affected the investors at the time of their investment as the mean value for each of the anchoring bias items is more than three. The test value for all the items mentioned above is more than the table value of 1.96 at a 5% level of significance, indicating that there is bias in anchoring behavior in the investors' behavior
- Representativeness behavior mean value is 3.42, which is more than three indicating that the investors are affected by this factor. With this analysis, the researcher now be able to say that the investors are biased in terms of representativeness behavior when they make investment decisions.
- The level of ability behavior in the study, which affected the investors, is moderate as the mean value of the same is around three. It can be stated that investors are biased in terms of their ability behavior when they make investment decisions.

### c. Impact of Investors Behavioral Factors on Their Investment Performance

**Table 4: Model Summary of Regression between Behavioral Factors and Investment Performance of Individual Investors**

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.817 <sup>a</sup>	.682	.659	.11345
a. Predictors: (Constant), Herding, Mental Accounting, Regret Aversion, Market Bias, Loss Aversion, Ability Bias, Representativeness, Anchoring				

The model summary table above shows that the correlation between components of investors behavior and their investment performance at 0.817 which is a very high negative relationship and the R Square is 0.682 which indicates that the variance in the dependent variable i.e., the investment performance of individual investors is explained by the components of their behavior to the extent of 68.2%. Usually for any regression model, if R-Square is more than 50%, the model is found to be a good one.

**Table 5: Regression Model Coefficients between Behavioral Factors and Investment Performance of Individual Investors**

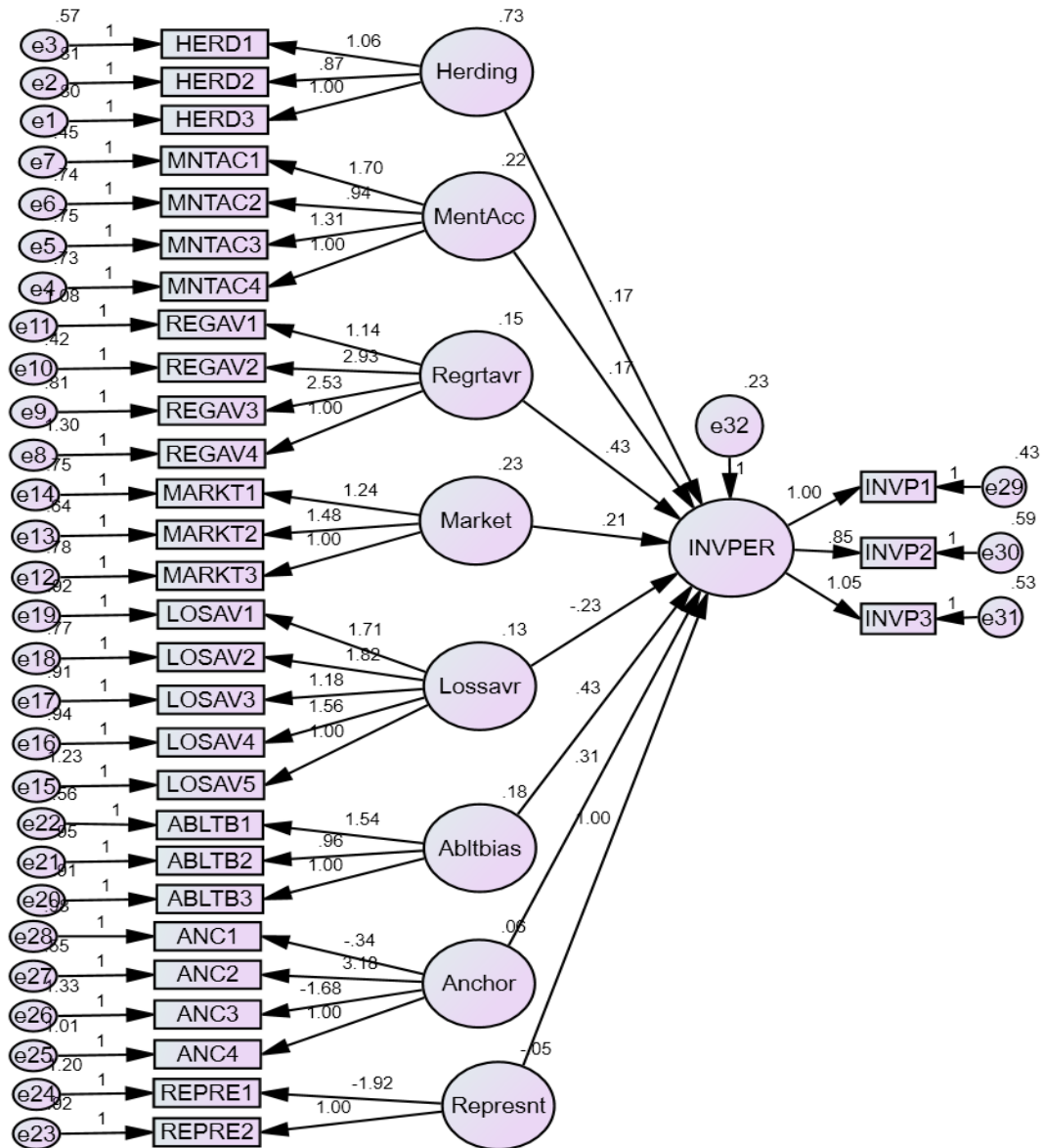
Coefficients					
Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	-1.2376	0.127		-5.630	0.000
Herding	-0.32	0.128	0.213	6.923	0.000
Mental Accounting	-0.15	0.112	0.193	7.923	0.000
Regret Aversion	-0.41	0.024	0.124	6.123	0.000
1 Market Bias	-0.09	0.140	0.245	4.892	0.000
Loss Aversion	-0.65	0.090	0.013	9.456	0.000
Ability Bias	-0.10	0.021	0.092	8.234	0.000
Representativeness	-0.09	0.091	0.045	6.872	0.000
Anchoring	-0.17	0.123	0.123	5.826	0.000

a. Dependent Variable: Investment Performance

The results of the regression coefficients reveal that the behavioral factors were found to be significantly the investment performance of Indian investors as the significance value for all the behavioral factors, is less than 0.05 (5%). Hence, the Null hypothesis is rejected at a 5% level of significance.

The results of this analysis are consistent with the theory that says that there is a negative relationship between behavioral factors and the investment performance of individual investors. The results also depict that all the investor's behavioral factors are negatively influencing their investment performance.

#### d. Structural Equation Modeling

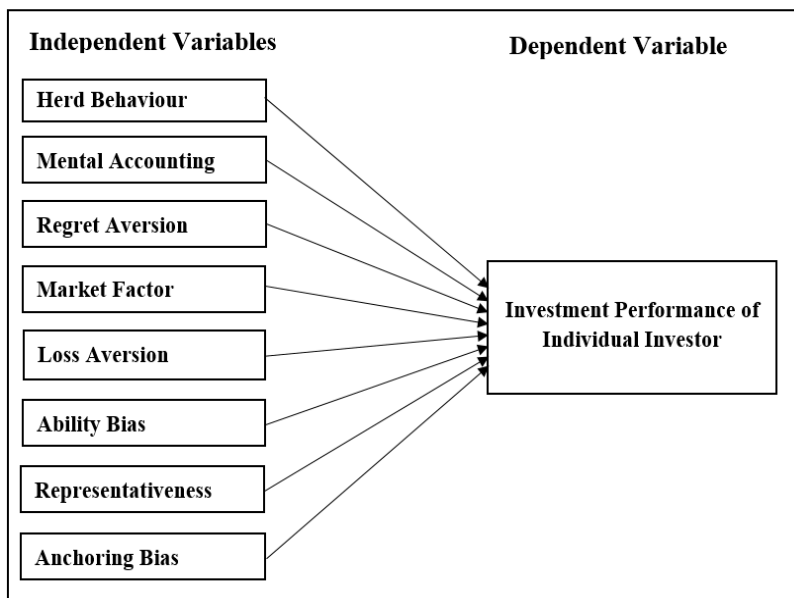


**Table 6: Selected Indices – SEM**

Parameter	Observed Value	Recommended Value
<b>GFI</b>	0.953	> 0.9 (Hooper et al, 2008)
<b>CFI</b>	0.950	> 0.9 (Hooper et al, 2008)
<b>TLI</b>	0.960	> 0.9 (Hooper et al, 2008)
<b>RMSEA</b>	0.078	.08 to 1.0 (MacCallum et al, 1996).
<b>RMR</b>	0.090	.08 to 1.0 (MacCallum et al
<b>CMIN/DF</b>	3.081	< 5 (good)
<b>Chi-Square (d.f)</b>	4999.350 (982)	

All the selected SEM indices satisfy the threshold value to say the model is statistically plausible. The SEM outcome ensured that all the behavioral factors are negatively related to the investment performance of individual investors in the Indian Capital Market.

**e. Final Model that shows the establishment of a relationship between investors Behavioral factors and the Investment Performance of Individual Investors.**



It is observed that in the above model gamblers fallacy and overconfidence do not affect investment decision and performance of individual investors in the Indian capital market.

## CONCLUSION

Behavioral factors have become a central point of discussion for many reasons today as they influence the overall market mood of the country. Biases have become a synonym for risk for investors. There is extensive literature on investors behavioral analysis both in developed and developing countries, yet, not much work has been taken up in the Indian capital market. Behavioral analysis and its understanding are quite useful in portfolio risk assessment, designing regulatory frameworks for the market, designing new investment products matching investor needs, and introducing sophisticated financial products like futures and options to cover unwanted and unnatural risks perceived by the investors. The present study made an attempt to analyze behavioral analysis and its impact on investor's performance and their loss aversion bias.

Volatility has become natural in the Indian capital market. However, excessive volatility is caused by the speculative behavior of the traders and a few other investor groups, imperfections in their trading mechanism, and lack of transparency. It is a serious aspect and will have severe repercussions for investors and policymakers if unregulated. Investors may alter their investment decisions due to increased volatility and equate higher volatility with higher risk.

## References

- 1) Adetiloye, K. A. (2012). Investors' Behavioral Biases and the Security Market: An Empirical Study of the Nigerian Security Market. *Accounting and Finance Research*, 1(1).
- 2) Allen, D. W. and Evans, A. D. (2005). Bidding and overconfidence in experimenting financial markets. *Journal of Behavioral Finance*, 6 (3), 8–120.
- 3) Barber, B. and Odean, T. (2002). All that glitters: the effect of attention and news on the buying behavior of individual and institutional investors. Working Paper (University of California, Berkeley, CA).
- 4) Chen, G., Kim, K.A. Nofsinger, J.R. and Rui, O.M. (2007). Trading performance, disposition effect, overconfidence, representativeness bias, and experience of emerging market investors. *Journal of Behavioral Decision Making*, 20 (4), 425- 451.
- 5) DeBondt, W.F.M. and Thaler, R. (1985). Does the stock market overreact? *Journal of Finance*, 40 (3), 793–805.
- 6) Devereux, M. B. and Smith, G. W. (1994). International Risk Sharing and Economic Growth. *International Economic Review*, 35(3), 535-550.
- 7) Goodfellow, C., Bohl, M. T. and Gebka, B. (2009). Together we invest? Individual and institutional investors' trading behavior in Poland. *International Review of Financial Analysis*, 18 (4), 212–221.
- 8) Grinblatt, M. and Han, B. (2001). The disposition effect and momentum. Working Paper. University of California, Los Angeles,
- 9) Kahneman, D. and Tversky, A. (1979). Prospect theory: an analysis of decision-making under risk. *Econometrica*, 47 (2), 263–291.
- 10) Nagy, R., A. and Obenberger, R., W. (1994). Factors Influencing Individual Investor Behavior. *Financial Analyst Journal*, 50 (4), 63-68.
- 11) Tversky, Amos and Daniel Kahneman (1992). Advances in Prospect Theory: Cumulative Representation of Uncertainty. *Journal of Risk and Uncertainty*, 5, 297-323.
- 12) Wicker, Frank, Douglas Hamman, Anastasia Hagen, Joy Lynn Reed, and James Wiehe (2001). Studies of Loss Aversion and Perceived Necessity. *The Journal of Psychology*, 129 (1), 75–89.
- 13) Yates, J.F., Lee, J., Bush, J.G. (1997). General Knowledge Overconfidence: Cross-National Variations, Response Style, and Reality. *Organizational Behavior and Human Decision Processes*, 70 (2), 87–94.