

## GLOBAL JOURNAL OF ENGINEERING SCIENCE AND RESEARCHES A STUDY ON THE IMPEDIMENTS OF INVESTORS RATIONALE

Afreen Fatima<sup>\*1</sup> & Dr. Reshma Farhat<sup>2</sup>

<sup>\*1</sup>Research Scholar, Department of Business Administration, University of Lucknow, Lucknow

<sup>2</sup>Assistant Professor, ICCMRT, Indira Nagar Sector:24, Lucknow

### ABSTRACT

Behavioural finance theories portray the investors' behaviour in an actual manner that supplements the traditional finance in a matter of rationality. Investment decision-making is a complex procedure and investors make the decision as per their own thinking and analyzing abilities without concern about whether the decision is rational or irrational. This decision may result in sometimes good or bad outcomes in terms of loss. The rational behaviour is also influenced by individual personality, attitude, moods, emotions and feelings as well. This study provides insights into the reasons for investors' behaviour in an irrational manner. The overall purpose of this study is to identify the impediments of rational behaviour. This paper conceptually induces some impediments namely, prospect theory, heuristics, overconfidence, herding, anchoring, availability & representativeness on the basis of review. The finding would reveal the reasons for behaving irrationally that would be easier to understand the psychological insight of an investor.

*Keywords: Psychological Biases, Irrational Behaviour, Investment Decisions.*

### I. INTRODUCTION

Indian stock market is fast growing and becomes more competitive day by day. It has been noted that the no. of the total investors who invest in the Indian stock market are less than 2.5% of the total Indian population as per the latest census report. That's why we Indians are good saver but not a good investor. As far as the demat account is concerned, the no. of demat account has been registered by the end of January 2017 is 27.25 million accounts including NSDL and CDSL out of the total population of 1300 million as per the Economic Times. In spite of that, the majority of investors are losing their money in the stock market because of the lack of expertise or knowledge, avoiding the basic rules of stock market, believing on rumors and inability to analyze the market trend and many more. It is imperative to understand the psychology of investors while making decisions to overcome the losses in returns.

A new paradigm shift towards the irrationality has given nascent approach of Behavioural Finance. The need is to better understand the complex decisions of investors. With the help of the psychology and other related fields, behavioural finance has evolved the notion of psychological biases. An investor predicts the possible outcome of their investment on the basis available information and expertise they possessed. When the actual return is different from the predicted one, then investors inquire about the difference. Behavioural finance studies the reasons for these differences relating to psychological biases and their influence on the investors' decision which ultimately affect the portfolio returns.

The purpose of this paper is to explore and identify the psychological impediments of investors which impacts on their investment decisions. This study tries to look into the matter of psychological biases of the investors relating to irrational decisions.

### II. BEHAVIOURAL FINANCE: IT'S EMERGENCE & IMPLICATION

Traditional finance theories assumed that investors should behave in a rational manner in order to maximize their wealth. Investors have used all available stock information considering the portfolio. Efficient Market Hypothesis (EMH), Capital Asset Pricing Model (CAPM) and Arbitrage Pricing Model (APT) are bounded by the rational

behaviour. Behavioural finance fills the lacuna between rationality and irrationality of investors and explains the investors' behaviour in the stock market (Singh and Shivprasad, 2018).

In the changing investment scenario, it is inevitable to understand the mindset of investors in order to achieve a higher return. Behavioural finance focuses on how investors made decisions and how investor actually behaves while making decisions. DeBondt et al. (2010) stated that Behavioural finance includes three aspects of psychology. Firstly the behavioural psychology sometimes referred to as cognitive psychology which explains how investors' mind undertakes necessary calculation to maximize return (Tversky and Kahneman, 1971). The secondary aspect is emotional psychology which focuses on the intensity of trading that investor decisions have used more strictly calculative process. The third aspect is social psychology which identifies the need to analyze the acceptance and encouragement of the investors' acts.

According to Olsen (1998), "*Behavioural finance seeks to understand and predict systematic financial market implications of psychological decision process*". Behavioural finance combines the disciplines of psychology and economics to explain the reasons for making irrational decisions. Shefrin (2001) studied the effect of psychology on investment decisions as well as the financial market. Shefrin (2002) stated that investors would become cognitive to recognize their own mistake with the help of behavioural finance.

Kumar & Goyal (2015) argued that the behaviour of investors is based on the risk element and their utility function for making balanced investment decisions. Kahneman and Tversky (1979) considered Expected Utility Theory (EUT) as "A Descriptive Model of Decision Making under Risk", and stated that investors under risky decisions are not behaving as per the utility theory. Therefore, the concept of Prospect Theory was revealed. Prospect theory demonstrate that investors don't exhibit rational behavioural under uncertainty. The presence of psychological biases always pushes the investors decision towards irrationality.

### III. PSYCHOLOGICAL IMPEDIMENTS OR BIASES

Behavioural finance tries to clarify our understanding of the investors' behaviour, how investors take the decision, how they manage and assess the information and what is the current state of investor while making investment decisions? To answer all these questions, behavioural finance has introduced the concept of psychological biases. The psychological biases are mistake or error of thinking that deviate from the correct judgment or decisions. Several researchers (Jhandir & Elahi, 2014; Loung and Ha, 2011; Rauf, 2014) identified the significance of psychological biases in analyzing investment decisions. There are several forms of the biases which are responsible for the irrational decision making. The selection of these biases considered under this study is taken on the basis of most studied psychological biases during 1979 to 2016 (Zahera and Bansal, 2017).

#### 1. Heuristics

Heuristics are those rule of thumb which explain how an investor makes investment decisions, how to make a judgement in the condition of incomplete information or in a complex situation and how to arrive at a certain point for making investments (Tversky and Kahneman, 1981; Parikh, 2011; Brabazon, 2000). Several studies (Tversky and Kahneman, 1981; Kannadhasan, 2006; Ritter, 2003; Waweru et al., 2008) have found evidence of using shortcuts in the decision-making process. Individuals' tendency is to avoid the assessment of different instrument or avenues of investment and mass information. In that case, individual needed to create a short-cut or heuristics. Heuristics are generally used by the individuals to speed up the investment decisions through experiences that may lead towards the irrational decisions (Subash, 2012) and biased behaviour.

The following heuristics are particularly left their impression on the decisions making.

##### 1.1 Representativeness:

It is a tendency of investors to follow their past experience that may result in the stereotype (Debondt, 1998). The investor's decisions may influence with the recent success that trend would continue to the future (Debondt & Thaler, 1985). Kahneman and Tversky (1972, 1973) stated that representativeness is a key factor in the intuitive

prediction of a financial decision of the investors. Intuition based decisions are generally irrational and biased in nature (Simon, 1987). Representativeness may cause irrationality in the decision making while buying the “hot” stocks (Debondt & Thaler, 1995; Waweru et al., 2008). Rational investors go through a rigorous analysis of all the available information about the stocks before making investments (Shimizu, 2007).

### 1.2 Overconfidence:

Overconfidence is the tendency to overestimate their abilities knowledge rather than believing the others and external information. Overconfidence leads to the excessive trading that may cause variability in the return as compared to the lesser trading (Barber & Odean, 2000; Biais et al., 2000). This is one of the reasons for mispricing of stocks (Daniel, Hirshleifer, & Subrahmanyam, 1998). Bernardo & Welch (2001) found that overconfident investors are able to generate more profit than other because of their risk tolerance level is high which resulted in the high return for a long run.

### 1.3 Anchoring:

The situation of anchoring may arise when an investor relied on certain previous information and not able to accept the present and updated information in the decision making, it is referred to as anchoring bias or adjustment bias. Barberis & Thaler (2003) argued that investors should inquire about the information which resembles their beliefs.

### 1.4 Gamblers fallacy

Gamblers fallacy is derived from Representativeness (Shefrin, 2007), is a perception of investors who inappropriately predicted that the present trend of stock market is self-correcting and it will reverse automatically (Tversky and Kahneman, 1971; Shefrin and Statman, 2000) that resulted to the good or bad anticipation about the decisions (Jahanzeb et al., 2012).

### 1.5 Availability

Availability is one of the common reasons for the irrational decisions in which investor tries to use the information which is easily available (Folkes, 1988) rather than evaluating the alternative information. It is a type of cognitive bias that influences the investors to take decisions on the basis of the excessive overweight on readily available information (Jahanzeb et al., 2012). Investor becomes choosy in case of the information availability and attention seeking news about the stocks (Barber and Odean, 2008) that may change the risk-taking capacity of the investors (Grable et al., 2004).

## 2. Prospect Theory

Kahneman and Tversky (1979) propounded the prospect theory by identifying the different state of mind of investors may act differently in the uncertain situation. Prospect theory concluded that the investors may be a risk taker or risk-averse as per the condition of uncertainty and they will prioritize the preferences for a different outcome. Prospect theory considers the following group of illusion which an investor's decisions may influence by these biases.

### 2.1 Loss Aversion

According to Dargham (2009), “*Loss aversion is the notion that investors suffer greater disutility from a wealth from an equivalent wealth gain in the absolute term*”. Behavioural finance claims that investors are loss averse in nature instead of risk-averse. It is the reason to hold a losing stock and sell the winning stocks (Grinblatt & Keloharju, 2000). In this case, investors may reluctant to realize the losses and may take higher risk to avoid the losing position.

### 2.2 Regret Aversion

It is a feeling of regret arises for taking bad investment decisions that can be experienced only after the realization of the losses (Fogel and Berry, 2006). Investors tend to believe that regret emotion from the loss is much greater than the pride realizing from the profit then investors try to avoid the pain of regret for the poor investment decisions (Shefrin and Statman, 1985).

### 2.3 Mental Accounting

According to Henderson & Peterson (1992), “*Mental accounting is a type of decision framing in which individuals from psychological accounts of the advantages and disadvantages of an event outcome*”. Shefrin and Statman (1985) examined mental accounting a tendency of investors to take each investment decision separately on the basis of a variety of criteria in constituting a portfolio. An investor may use separate mental accounts that will lead toward inefficient investment decisions, for example, an investor buys a commodity with high-interest rate while making an investment in child’s future plan on low-interest rate (Singh, 2012).

Other forms of impediments or biases are also impacted on the investors’ decisions, are as under:

### 3. Herd Behaviour

When an investor forecasts and makes decisions on basis of a reference group or other market participants for purchasing of the stocks and mutual funds, they follow the herd (Olsen, 2008; Hirshleifer & Teoh, 2003). It is not necessary that investors mimic the decisions of others that should be rational and individual decisions may vary from the mimic decisions (Jaiswal and Kamil, 2012). Previous studies (Welch, 2000; Economo et al., 2010) stated that herd behaviour always influences the wrong decisions and create excess volatility.

### 4. Disposition Effect

Shefrin and Statman (1985) postulated the concept of loss aversion into a new theory referred as Disposition effect. It is a tendency of investors to hold the losing stock and sell the well-performing stock and those stocks have increasing value; that may affect the investment return (Shefrin, 2005; Barber and Odean, 1999; Odean, 1988).

### 5. Framing

Framing reflects that how investors make different choices relating to a bad and good outcome of the decision. It is a way to frame out the concept is presented to the investors (Ritter, 2003). Tversky and Kahneman (1981) opine that framing is helpful in examining the duration of holding the rational choices of investor that how long they hold and when they become irrational if the same problem is presented in a different way.

### 6. Social Influence

Social influence is one of the common biases which are generally found in the investment decision-making. Individual discuss with their friends, neighbours, colleagues and influence with their opinion (Nofsinger, 2005; De Marzo et al., 2003). Most studies claim that media is also an important factor which influences the investor decisions (Shiller, 2000; Davis, 2006) and the stock returns (Shive, 2010). Those investors who consistently involve in gathering high quality and updated information that decision will be more reliable than others (Heinstrom, 2003).

### 7. Risk Tolerance

Financial risk tolerance is *the maximum amount of uncertainty that someone is willing to accept while making financial decisions, reaches almost every part of economic and social life*” (Grable, 2000). Risk tolerance is the factor that defines the risk profile of investors and the ability to take risky decisions. Yao et al., (2005) argued that higher risk is the prerequisite for accumulating the wealth. Several studies claim that females are more risk-averse in nature than male (Mayfield et al., 2008; Yao and Hanna, 2005; Hallahan et al., 2004).

### 8. Confirmation Bias

Confirmation Bias as the name suggests, an investor tries to confirm their preconceived notions by avoiding the interpretations that may create contradiction towards the prior opinion (Shefrin, 2007). Gupta and Agarwal (2016) found that the majority of India investors have pre-decided the company in which they want to invest then look for the information that supports the previously held decisions. The investors pre-assume that the growth companies will have a well performing and good stock that may affect the investment decisions in the wrong way (Joo and Durri, 2015).

### 9. Hindsight Bias

Hindsight bias occurs when an investor predicts the wrong outcome and overestimates the accuracy of predicted outcome (Shiller, 2000; Hertwig et al., 1997; Perrin et al., 2015). Previous researchers found that the investor's decision is highly affected by hindsight bias that may result in the variation in the risk exposure and portfolio allocation (Monti and Legrenzi, 2009).

#### IV. IMPACT OF PSYCHOLOGICAL IMPEDIMENTS ON INVESTORS RATIONALE IN THE INDIAN CONTEXT

Behavioural finance discusses the irrationality in the decision making and provides the reasons of psychological biases which influence the investor's decisions that lead to the variation in the return. Statman (2008) concluded that individual decisions are influenced by their origin and other demographic factors. Individual who belongs to the low-income country are high propensity to take the risk as compared to a high-income country.

It has been noted that psychological biases have significantly associated with the investment decision-making process (Shahzad et al., 2013). The rational investment decisions are also influenced by herding bias in the Indian equity market. Some researchers (Nagpal & Bodla, 2009) support this argument and other studies (Prosad et al., 2012) found no evidence of severe herding. Overconfidence and regret aversion are the possible cause of irrational decisions in the Indian investors (Misal, 2003). The trading patterns of investor are inclined towards the behavioural biases to simplify the risky decisions they often use heuristics (Chen et al., 2004).

Chandra and Sharma (2010) have coined that Indian investors are also influenced by the psychological biases and even they are more sensitive towards the rumors. The investors are highly influenced by the opinion of their friends and relatives (HS & others, 2009; Fatima et al., 2017). Chaarlas & Lawrence (2012) found the evidence of anchoring, loss aversion and framing biases in the Indian equity investors. They are conservative in nature and have less risk tolerance and try to take help from the reference group for risky decisions (Nagpal & Bodla, 2009).

The following summarized the effect of psychological impediments and their consequences on rational investment decisions.

Impediments	Effects on Investor	Their Consequence
<b>Representativeness</b>	Tendency to associate new event into a known event and make investments accordingly.	Purchasing the overpriced stocks.
<b>Overconfidence</b>	Excessive trades, high risk, failure to diversify.	Pay higher brokerage and taxes, chance of high losses.
<b>Anchoring</b>	Tendency to consider logically irrelevant price level as important in the process of decision making.	Missed investment opportunities and bad entry timing into the market.
<b>Gamblers' Fallacy</b>	Taking too much risk after a lucky win.	Chance of high losses.
<b>Availability</b>	Tendency to take decisions on past experience and their familiarity.	Overestimate the likelihood of event.
<b>Loss Aversion</b>	Buy past winning stocks & sell past loser.	Increase volatility in stock price
<b>Regret Aversion</b>	Selling winners too soon, holding losers too long.	Reduced returns.
<b>Mental Accounting</b>	Consider Undiversified portfolio.	Irrational and negative effects on returns.
<b>Herd Behaviour</b>	Tendency to follow other's action & lack of individuality in decision making.	Return will be adverse in wrong direction and excess volatility.
<b>Disposition Effect</b>	Buying and selling decision is based on	May suffer loss of winning stock.

	their sales price.	
<b>Framing</b>	Information presented in various ways.	Ability to hold rational decisions
<b>Social Influence</b>	Influence on trading behaviour, changing of investment pattern.	Increased chances of the acceptance of irrational decision.
<b>Risk Tolerance</b>	Tendency to accept the variability in return through risky decisions.	Increase financial stress in the individuals.
<b>Confirmation</b>	Searching for information to confirm their past beliefs	Places incorrect value for stock.
<b>Hindsight</b>	Tendency to feel that a past event was obvious when it really was not, at onset.	Incorrect oversimplification of decision making.

Source: Subash, R. (2012). *Role of Behavioral Finance in Portfolio Investment Decisions: Evidence from India*

## V. CONCLUSION

The aim of this study was to assess the investment decision from the psychological point of view. The investors are relying on the heuristics and biases that cause the irrational decisions and their effect is leading on inexperienced and experienced investors also (Tversky and Kahneman, 1974). Every investor is influenced by some biases depending on the socio-demographics, geographic and personality characteristics. This study can be useful in understanding the psychological impediments and their consequences on investment decisions. Previous studies (Nikiforow, 2010; Gupta and Agarwal, 2016) have stated some remedial actions to overcome with these impediments by providing training to deal in a stock market, organizing awareness programmes on psychological factors.

The limitation of this study is to consider only those psychological impediments which were mostly studied in the previous decades. Other biases like fear, emotional biases, recency biases, conservatism, home biases also show some significant effect on the rational investment decisions (Perrin et al., 2015; Kannadhasan, 2006). Some studies (Mayfield et al., 2008; Fatima et al., 2017; Jhandir & Elahi, 2014) also suggested that psychological biases also impacted on the investors' personality characteristics. However, it is necessary to examine the influence on personality traits of individuals. Hence, Behavioural finance should be considered as a supplementary basis in order to explain psychological aspect but should not be a replacement of traditional finance which was not covered (Birau, 2012; Singh, 2012).

## REFERENCES

1. Akhtar, F., Thyagaraj, K. S., & Das, N. (2017). *The impact of social influence on the relationship between personality traits and perceived investment performance of individual investors: Evidence from Indian stock market. International Journal of Managerial Finance, 14(1), 130-148.*
2. Barber, B. M., Lee, Y. T., Liu, Y. J., & Odean, T. (2008). *Just how much do individual investors lose by trading?. The Review of Financial Studies, 22(2), 609-632.*
3. Barber, B. M., & Odean, T. (1999). *The courage of misguided convictions. Financial Analysts Journal, 41-55.*
4. Barber, B. M., & Odean, T. (2000). *Trading is hazardous to your wealth: The common stock investment performance of individual investors. The journal of Finance, 55(2), 773-806.*
5. Bernardo, A. E., & Welch, I. (2001). *On the evolution of overconfidence and entrepreneurs. Journal of Economics & Management Strategy, 10(3), 301-330.*
6. Biais, B., Martimort, D., & Rochet, J. C. (2000). *Competing mechanisms in a common value environment. Econometrica, 68(4), 799-837.*
7. Birău, F. R. (2012). *The impact of Behavioral finance on stock markets. Annals of the „Constantin Brâncuși” University of Târgu Jiu, Economy Series, 3, 45-50.*
8. Brabazon, T. (2000). *A Connectivist Approach to Index Modelling in Financial Markets. Aug.-Sep.*

9. Chabi Gupta, P., & Agarwal, K. (2016). Investor biases in Indian stock market. *International Journal of Technical Research & Science*, 1(5), 56-60.
10. Chandra, A., & Sharma, D. (2010). Investment management by individual investors: A behavioral approach. *IUP Journal of Behavioral Finance*, 7(1/2), 7.
11. Chaarlas, L. J., & Lawrence, A. D. R. (2012). Behavioural Finance A Boon to Investors. *Journal of Finance, Accounting and Management*, 3(1), 32.
12. Chen, G. M., Kim, K. A., Nofsinger, J. R., & Rui, O. M. (2004, January). Behavior and Performance of Emerging Market Investors: Evidence from China. Retrieved September 10, 2018, from [www.ccf.org.cn: www.ccf.org.cn/cicf2006/cicf2006paper/20060104133427.pdf](http://www.ccf.org.cn/www.ccf.org.cn/cicf2006/cicf2006paper/20060104133427.pdf)
13. Daniel, K., Hirshleifer, D., & Subrahmanyam, A. (1998). Investor psychology and security market under-and overreactions. *The Journal of Finance*, 53(6), 1839-1885.
14. Dargham, N. A. S. (2009). The implications of Behavioral Finance. *Journal of Economics*.
15. Davis, A. (2006). Media effects and the question of the rational audience: lessons from the financial markets. *Media, Culture & Society*, 28(4), 603-625.
16. De Bondt, W. F. (1998). A portrait of the individual investor. *European economic review*, 42(3-5), 831-844.
17. DeBondt, W., Forbes, W., Hamalainen, P., & Gulnur Muradoglu, Y. (2010). What can behavioural finance teach us about finance?. *Qualitative Research in Financial Markets*, 2(1), 29-36.
18. De Bondt, W. F., & Thaler, R. (1985). Does the stock market overreact?. *The Journal of finance*, 40(3), 793-805.
19. De Bondt, W. F., & Thaler, R. H. (1995). Financial decision-making in markets and firms: A behavioral perspective. *Handbooks in operations research and management science*, 9, 385-410.
20. De Marzo, P., Vayanos, D., Zwiebel, J. (2003). Persuasion bias, social influence and uni-dimensional opinions. *Quarterly Journal of Economics*, 118(3), 909-968.
21. Economou, F., Kostakis, A., & Philippas, N. (2010, March). An examination of herd behaviour in four mediterranean stock markets. In *European economics and finance society conference paper* (pp. 1-20).
22. Fogel, S. O. C., & Berry, T. (2006). The disposition effect and individual investor decisions: the roles of regret and counterfactual alternatives. *The journal of behavioral finance*, 7(2), 107-116.
23. Folkes, V. S. (1988). The availability heuristic and perceived risk. *Journal of Consumer research*, 15(1), 13-23.
24. Grable, J., Lytton, R., & O'Neill, B. (2004). Projection bias and financial risk tolerance. *The Journal of Behavioral Finance*, 5(3), 142-147.
25. Grable, J. E. (2000). Financial risk tolerance and additional factors that affect risk taking in everyday money matters. *Journal of Business and Psychology*, 14(4), 625-630.
26. Grinblatt, M., & Keloharju, M. (2000). The investment behavior and performance of various investor types: a study of Finland's unique data set. *Journal of financial economics*, 55(1), 43-67.
27. Growth in demat accounts gathers pace - *The Economic Times*
28. Hallahan, T. A., Faff, R. W., & McKenzie, M. D. (2004). An empirical investigation of personal financial risk tolerance. *Financial Services Review-Greenwich*, 13(1), 57-78.
29. Heinström, J. (2003). Five personality dimensions and their influence on information behaviour. *Information research*, 9(1), 9.
30. Henderson, P. W., & Peterson, R. A. (1992). Mental accounting and categorization. *Organizational Behavior and Human Decision Processes*, 51(1), 92-117.
31. Hertwig, R., Gigerenzer, G., & Hoffrage, U. (1997). The reiteration effect in hindsight bias. *Psychological Review*, 104(1), 194.
32. Hirshleifer, D., & Hong Teoh, S. (2003). Herd behaviour and cascading in capital markets: A review and synthesis. *European Financial Management*, 9(1), 25-66.
33. HS, M. B., & others. (2009). Indian investors' dilemma-a study of financial market paradigm conflict through behavioral finance approach. *Osmania Journal of International Business Studies*, 4(2), 92-100.
34. Jahanzeb, A., & Muneer, S. (2012). Implication of behavioral finance in investment decision-making process. *Information Management and Business Review*, 4(10), 532.
35. Jaiswal, B., & Kamil, N. (2012). Gender, behavioral finance and the investment decision. *IBA Business Review*, 7(2), 8-22.

36. Jhandir, S. U., & Elahi, M. A. (2014). *Behavioral Biases in Investment Decision Making and Moderating Role of Investor's Type*.
37. Joo, B. A., & Durri, K. (2015). *Comprehensive review of literature on behavioural finance*. *Indian Journal of Commerce and Management Studies*, 6(2), 11.
38. Kahneman, D., & Tversky, A. (1972). *Subjective probability: A judgment of representativeness*. In *The concept of probability in psychological experiments* (pp. 25-48). Springer, Dordrecht.
39. Kahneman, D., & Tversky, A. (1979). *Prospect theory: An analysis of decision under risk*. *Econometrica: Journal of the Econometric Society*, 263–291.
40. Kannadhasan, M. (2006). *Role of Behavioural Finance in Investment decisions*. Retrieved December 28, 2018, from [www.researchgate.net/publication/265230945](http://www.researchgate.net/publication/265230945)
41. Kumar, S., & Goyal, N. (2015). *Behavioural biases in investment decision making—a systematic literature review*. *Qualitative Research in financial markets*, 7(1), 88-108.
42. Luong, P. L., & Ha, T. T. D. (2011). *Behavioral factors influencing individual investor's decision making and performance*. *Survey of the Ho Chi Minh Stock Exchange*, Umea School of Business Spring semester.
43. Mayfield, C., Perdue, G., & Wooten, K. (2008). *Investment management and personality type*. *Financial Services Review*, 17(3), 219-236.
44. Misal, D. M. (2013). *A Study of Behavioral Finance and Investor's Emotion in Indian Capital Market*. *International Journal of Economics and Business Modeling*, 4(1), 206.
45. Monti, M., & Legrenzi, P. (2009). *Investment Decision-Making and Hindsight Bias*. In *Annual meeting of cognitive science society*. Amsterdam.
46. Nagpal, S., & Bodla, B. S. (2009). *Impact of investors' lifestyle on their investment pattern: an empirical study*. *IUP Journal of Behavioral Finance*, 6(2), 28.
47. Nikiforow, M. (2010). *Does training on behavioural finance influence fund managers' perception and behaviour?*. *Applied Financial Economics*, 20(7), 515-528.
48. Nofsinger, J. R. (2005). *Social mood and financial economics*. *The Journal of Behavioral Finance*, 6(3), 144-160.
49. Parikh, Parag. (2011). *Value Investing and Behavioral Finance*. New Delhi: Tata Mcgraw Hill.
50. Odean, T. (1998). *Are investors reluctant to realize their losses?*. *The Journal of finance*, 53(5), 1775-1798.
51. Olsen, R. A. (1998). *Behavioral finance and its implications for stock-price volatility*. *Financial analysts journal*, 10-18.
52. Olsen, R. A. (2008). *Cognitive dissonance: the problem facing behavioral finance*.
53. Perrin, A. (2015). *Social media usage*. *Pew research center*, 52-68.
54. Prosad, J. M., Kapoor, S., & Sengupta, J. (2012). *An examination of herd behavior: An empirical evidence from Indian equity market*. *International Journal of Trade, Economics and Finance*, 3(2), 154.
55. Rauf, A. L. A. (2014). *Individual Investor Behaviour: Pre and Post Crisis Study on Bahrain*. *Journal of Emerging Trends in Economics and Management Sciences*, 5(5), 457.
56. Ritter, J. R. (2003). *Behavioral Finance*, *Pacific-Basin Finance Journal*, 11(4), 429-437.
57. Shefrin, H. (2001). *Behavioral corporate finance*. *Journal of applied corporate finance*, 14(3), 113-126.
58. Shefrin, H. (2002). *Beyond greed and fear: Understanding behavioral finance and the psychology of investing*. Oxford University Press on Demand.
59. Shefrin, H. (2005). *A Behavioral Approach to Asset Pricing*, Amsterdam: Elsevier Academic Press.
60. Shefrin, H. (2007). *Behavioral finance: biases, mean–variance returns, and risk premiums*. In *CFA Institute Conference Proceedings Quarterly* (Vol. 24, No. 2, pp. 4-12). CFA Institute.
61. Shefrin, H., & Statman, M. (1985). *The disposition to sell winners too early and ride losers too long: Theory and evidence*. *The Journal of finance*, 40(3), 777-790.
62. Shefrin, H., & Statman, M. (2000). *Behavioral portfolio theory*. *Journal of financial and quantitative analysis*, 35(2), 127-151.
63. Shehzad, S. J., Ali, P., Saleem, F., Ali, S., & Akram, S. (2013). *Stock Market Efficiency: Behavioural or Traditional Paradigm? Evidence from Karachi Stock Exchange (KSE) and Investors Community of Pakistan*.
64. Shiller, R. J. (2000). *Measuring bubble expectations and investor confidence*. *The Journal of Psychology and Financial Markets*, 1(1), 49-60.



65. Shimizu, K. (2007). *Prospect theory, behavioral theory, and the threat-rigidity thesis: Combinative effects on organizational decisions to divest formerly acquired units*. *Academy of Management Journal*, 50(6), 1495-1514.
66. Shive, S. (2010). *An epidemic model of investor behavior*. *Journal of Financial and Quantitative Analysis*, 45(1), 169-198.
67. Singh, S. (2012). *Investor irrationality and self-defeating behavior: Insights from behavioral finance*. *Journal of Global Business Management*, 8(1), 116.
68. Singh, J. E., & Shivaprasad, H. N. (2018). *Behavioral Biases Affecting Investors' Investment Decision: A Review of Literature*.
69. Statman, M. (2008). *Countries and culture in behavioral finance*. In *CFA Institute Conference Proceedings Quarterly* (Vol. 25, No. 3, pp. 38-44). CFA Institute.
70. Subash, R. (2012). *Role of behavioral finance in portfolio investment decisions: evidence from India*.
71. Tversky, A., & Kahneman, D. (1971). *Belief in the law of small numbers*. *Psychological bulletin*, 76(2), 105.
72. Tversky, A., & Kahneman, D. (1973). *Availability: A heuristic for judging frequency and probability*. *Cognitive psychology*, 5(2), 207-232.
73. Tversky, A., & Kahneman, D. (1974). *Judgment under uncertainty: Heuristics and biases*. *Science*, 185(4157), 1124-1131.
74. Tversky, A., & Kahneman, D. (1981). *The framing of decisions and the psychology of choice*. *Science*, 211(4481), 453-458.
75. Waweru, N. M., Munyoki, E., & Uliana, E. (2008). *The effects of behavioral factors in investment decision-making: A survey of institutional investors operating at the Nairobi Stock Exchange*. *Finance and Accounting*, 1(3), 334-343.
76. Welch, I. (2000). *Herding among security analysts*. *Journal of Financial Economics*, 58(3), 369-396.
77. Yao, R., Gutter, M., & Hanna, S. (2005). *The financial risk tolerance of Blacks, Hispanics and Whites*.
78. Yao, R., & Hanna, S. D. (2005). *The effect of gender and marital status on financial risk tolerance*.
79. Zahera, S. A., & Bansal, R. (2018). *Do investors exhibit behavioral biases in investment decision making? A systematic review*. *Qualitative Research in Financial Markets*, 10(2), 210-251.