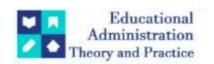
2024, 30(6), 2419-2425 ISSN: 2148-2403

https://kuey.net/

**Research Article** 



# "A study on Impact of Behavioural aspects on Mutual fund Investment Decision Making in India"

Mansi Chadha<sup>1\*</sup>, Dr. Ankita Nagpal<sup>2</sup>

 ${}^{_{1}\!*}$ Research Scholar Lingaya's Vidyapeeth mansichhabra 85@gmail.com

**Citation:** Mansi Chadha, et al. (2024) "A study on Impact of Behavioural aspects on Mutual fund Investment Decision Making in India", Educational Administration: Theory and Practice, 30(6), 2419-2425 Doi: 10.53555/kuey.v30i6.5755

# **ARTICLE INFO**

# **ABSTRACT**

Mankind has frequently been driven to develop a growing number of investing outlets in order to obtain superior returns. One of the financial innovations that has tremendously assisted small investors in building up capital is the idea and design of mutual funds. Investor decisions might be made in irrational or sensible ways depending on the situation. This study intends to investigate "the impact of behavioral aspects cognitive behavior, heuristic behavior and investor sentiment on investment decision-making among Indian mutual fund". The results of this study have significant ramifications for investors since they can help them recognise their own biases and foresee them while making investing decisions.

**Keywords:** Behavior, Cognitive, Heuristic, Decision Making, Investor.

#### Introduction

Currently, a majority of people are faced with the need to make discerning decisions in their lives, where certain choices hold significant weight while others bear less impact. This implies that certain decisions exhibit a straightforward nature, while others possess a complex nature, hence necessitating the implementation of a multi-faceted decision-making framework. According to Kubilay and Bayrakdaroglu (2016), contemporary research in the domain of conventional finance indicates that individual investors possess a desire to engage in rational decision-making when it comes to their investment choices. Numerous theories in the field of traditional finance have been developed on the assumption that market players always act rationally and make judgements based on rationality. Arora and Kumari (2015) assert that a majority of investors employ various models and theories rooted in traditional finance in order to assess the risk and anticipated returns associated with investing choices. Hence, conventional financial theories posit the assumption that individual investors exhibit rational behaviour.

With the advancement of information, a novel paradigm known as behavioural finance has emerged. The process of making investment decisions is intricately linked to financial behaviour. The field of financial behaviour examines the influence of psychological phenomena on financial outcomes (Shefrin, 2000).

The scope of financial behaviour research seeks to comprehend the consequences of investor behaviour in the market with regard to decision-making influenced by psychological elements. According to Krishnamurti (2009), there exist constraints on investors' capacity to ascertain stock value using fundamental research and technical analysis. Investors in the capital market often exhibit irrational behaviour during stock transactions due to the unconscious effect of psychological factors on their decision-making processes. According to Puspitaningtyas (2013), it has been demonstrated that accounting considerations are taken into consideration by investors in Indonesia during the process of making investment decisions. Investor psychology, which is expressed as a unique signal, is, nonetheless, the most important consideration when making decisions. Luong and Ha's (2011) research shows how herd mentality, prospect theory, and market reactions are all influenced by human psychology and so affect investment decisions.

When examining the field of decision-making from a psychological standpoint, it becomes evident that theories may be categorised into three distinct perspectives: psychological, cognitive, and normative. The psychological viewpoint encompasses an examination of human preferences as they pertain to risk-taking attitudes. When the consideration of environmental factors is included in the decision-making process, it is referred to as cognitive decision-making. Conversely, when individuals use their own reasoning and logic to arrive at decisions, it is referred to as normative decision-making.

Investor behaviour serves as a reflection of the decisions made. Behaviour refers to the spectrum of activities shown by individuals. The reaction of an individual to different stimuli or inputs is referred to as their

<sup>&</sup>lt;sup>2</sup>Associate Professor Lingaya's Vidyapeeth ankitadhamija@gmail.com

response. The behaviour of investors encompasses the selection of investments made by individuals and the tactics employed during the decision-making process. According to Culters, Poterba, and Lawrence (1989), researchers have observed that decision-making in investment is a perplexing occurrence. They suggest that investment analysis may be conducted through several means of examination, including elementary, environmental, personal, and scientific approaches. Bandura (1962) proposed the social cognitive theory, which emphasises the need to consider the environment in decision-making processes to enhance efficiency. The process of making investment decisions would be deemed inadequate without the inclusion of predetermined plans or strategies, sometimes referred to as formula plans. The stock market is well recognised as a very volatile and uncertain investment avenue. Consequently, inexperienced investors often struggle to accurately forecast potential returns. Consequently, they rely on formulaic strategies to guide their portfolio selection process.

### Overconfidence bias and its impact on investment decision-making

Pompain (2006) posits that overconfidence is a prominent heuristic bias, characterised by an unjustified reliance on one's intuitive reasoning, judgements, and cognitive capacities. The phenomenon of individuals overestimating their knowledge and talents might be characterised as a manifestation of overconfidence, as seen by De Bondt and Thaler (1995) and Hvide (2002). Pompain (2006) asserts that individuals frequently overestimate the worth of their deficiencies while underestimating their own strengths, resulting in the manifestation of overconfidence bias. According to prior scholarly research, there are three distinct qualities that are indicative of people who exhibit the overconfidence bias. There exist three phenomena in which an excessive amount of estimation, placement, and precision is seen. Overestimation occurs when people place more stock in their own abilities and the opinions of others about the quality of their work than they do in their actual performance (Statman et al., 2006). Duttle Kai's (2015) research suggests that indicators of overestimation include over-performance, perceived control, perceived success probability, and overestimation of one's own skills. According to Larrick et al. (2007), when individuals perceive themselves as superior to others, this phenomenon might be referred to as overplacement. When investors disregard the risk considerations that are linked to their investing decisions and exhibit an excessive level of certainty in their judgements, this phenomenon is referred to as over-precision (Odean, 1999). In certain instances, individual investors may fail to adequately adjust their original evaluation upon the acquisition of fresh information, therefore neglecting to acknowledge the potential inaccuracies in their assessment. This factor also contributes significantly to the phenomenon of overconfidence bias.

The existence of overconfidence bias has major negative consequences for both the decision-making process and the performance outcomes of investors when thinking about the investing decision-making process. According to Bakar and Yi (2016), the overconfidence bias has a significant impact on investors' choices. When an investor has overconfidence bias, they have a propensity to underestimate the risks associated with their investments and overestimate the predicted profits (Baker & Nofsinger, 2010). According to Shefrin (2000), when investors engage in trend forecasting, they tend to overestimate their own capabilities, leading to unfavourable predictions of outcomes. According to Odean (1998), traders' overconfidence is to blame for excessive trading on stock exchanges, which in turn reduces traders' earnings. Overconfidence leads Chinese investors to make poor trading decisions and mistakes, according to research by Chen et al. (2007). Institutional investors' trading choices on the Nairobi Stock Exchange were affected by overconfidence bias, found Waweru et al. (2008). Overconfidence bias, as proposed by Kengatharan and Kengatharan (2014), has a major negative effect on the quality of decisions made and the results achieved in the realm of investments. Overconfidence does not play a role in the choices of individual equities investors at the CSE, as shown by the research of Gamage et al. (2021).

# Investor sentiment bias impact on investment decision-making

There is a positive correlation between an investor's perceived skill in the capital market and their frequency of trading. Mature investors sometimes overlook an additional investing aspect in their investment operations due to their strong sense of self-assurance and confidence in their abilities. According to Christanti and Mahastanti (2011), According to the study conducted by Glaser and Weber (2007), individuals who possess perceptions above the average level in terms of investing skill and prior performance tend to exhibit higher levels of engagement in trading activities within financial markets. According to Ivada's (2010) research, it has been demonstrated that in the context of Indonesia, certain demographic attributes such as being male, possessing a higher level of education, and being of a certain age, may significantly influence investors' opinion of competence. Investors that possess this particular viewpoint are more likely to often make investing judgements.

### **Availability Bias impact on Investment Decision Making**

The phenomenon of relying excessively on readily accessible information when forming judgements or predictions is sometimes referred to as the availability bias (Ngoc, 2013). The occurrence of availability bias is observed when an investor evaluates the likelihood of a result based on the ease with which the outcome may be recalled (Tversky & Kahneman, 1974). Numerous studies have indicated that decision-makers

afflicted by availability bias exhibit a tendency to forgo diversification in their investment portfolios. These individuals often opt for investments without engaging in comprehensive analyses of the available options, thereby neglecting alternative investment opportunities and restricting their overall investment potential. Numerous studies have shown that the availability bias influences investment choices in a positive way. Improved investment selections due to availability bias lead to higher returns for individual investors. Availability bias was also shown to significantly impact individual investors' decision-making processes by Khan (2015). Individual equity investors' decisions at the CSE are said to be significantly impacted by the availability heuristic, as proposed by Gamage et al. (2021). Academics with a different point of view have found situations in which the availability bias has a negative effect on people's investment decisions. Institutional investors trading on the Nairobi Stock Exchange may be subject to availability bias, as shown by the findings of a study conducted by Waweru et al. (2008). The cognitive bias known as availability bias has also been demonstrated to impact the decision-making process of people when choosing stocks (Massa & Simonov, 2005).

# Anchoring and adjustment bias has been well recognised as a cognitive bias impact on investment decision-making

The phenomenon of anchoring and adjustment bias manifests in the decision-making process, wherein individuals tend to heavily depend on the first information presented while making investment decisions or assessments. The original piece of information serves as the foundation upon which all subsequent assessments and conclusions are based. Consequently, there is a possibility of encountering errors or biases when interpreting further information. The phenomenon known as anchoring, as described by Kahneman and Tversky (1974), suggests that differing beginning positions might lead to biassed estimations that are influenced by the initial value. Individual investors may have a predisposition to anchor their ideas or thoughts to a reference point that is logically irrelevant throughout the process of making financial choices, as stated by Pompain (2006). The anchoring and switching bias may be at play here.

Institutional investors trading on the Nairobi Stock Exchange were shown to be influenced by anchoring and adjustment bias in a research conducted by Waweru et al. (2008). Ishfaq and Anjum (2015) found that people's decisions about risky investments are improved by the presence of anchoring and adjustment bias. According to research by Kengatharan and Kengatharan (2014), the anchoring heuristic has a significant positive effect on individual investors' investing decision-making and performance. Abraham et al.'s (2014) study provides supporting evidence for the existence of anchoring and adjustment bias.

Several researchers have shown that this bias affects many different types of decisions, from purchasing property to evaluating judges in contests to determining compensation for personal injuries. There is a danger of making incorrect assessments and missing out on opportunities because of this bias.

### The Influence of Investors' Heuristics on Investment Decision Making

The risk tolerance of an investor was significantly influenced by demographic variables such as age, gender, employment, and educational attainment. Previous studies conducted by Chandra (2008) and Kaur et al. (2016) have found no significant correlation between the gender of investors and their propensity for risk-taking. Several studies have investigated the correlation between personality traits and their impact on the determination of an investor's investing personality and decision-making processes. The study further posited that the awareness of investors towards the market exhibits a significant and substantial correlation with their investing disposition. The subsequent findings indicate that investment advisers should take into account the personality features of individuals prior to providing financial advice (Charles et al., 2014; Olga Pak et al., 2013). Previous studies have demonstrated that males have a greater inclination towards risk-taking compared to females, as evidenced by the works of Sung and Hanga (1996) and Slovic (1996). However, it is widely acknowledged in contemporary society that women are not inferior to men in any given endeavour.

# Methodology

The researchers employed a quantitative technique to collect the data, which effectively incorporates the many elements of human resource analytics (HRA) capability and assesses their influence on organisational performance. A meticulously created and disseminated structured questionnaire was administered to a representative sample of "160 individual investors in India. The questionnaire was responded using five-point Likert scale that was ranging from strongly disagree to strongly agree". The data were subjected to analysis using a range of statistical methods in order to determine the influence of behavioural factors, namely cognitive behaviour, heuristic behaviour, and investor sentiment, on the process of investment decision-making within the context of Indian mutual funds.

A survey is an effective method for gathering insights into public opinion on a certain subject or for obtaining self-reported information on the behaviour of a particular group. The primary data for this study is collected through the use of surveys or schedule questionnaires. The distribution of the questionnaire was conducted using both online and offline channels in this study. The distribution of the questionnaire occurs through an

internet platform, wherein participants complete a self-administered questionnaire independently. The researchers employed a survey methodology to gather crucial data, utilising a meticulously designed, structured questionnaire. Additionally, secondary data was obtained from various sources, such as previous studies, scholarly publications, research journals, and reputable websites.

### **Analysis**

Table 1. Demographic Characteristic

Characteristic	Frequency	Percentage (%)		
Age				
Upto 25	22	13.7		
25-35 years	86	54		
35-55 years	35	21.8		
Over 55	17	10.6		
<b>Fotal</b>	160	100		
Gender				
Male	108	67		
Female	52	33		
Total	160	100		
Education Background				
Graduate	76	48		
Post Graduate	53	33		
Other	31	19		
<b>Fotal</b>	160	100		
Investment Experience				
1-5	93	58		
5-10	56	35		
Over 10	11	17		
<b>Fotal</b>	160	100		
Investment Portfolio				
Upto 50000	28	18		
50000 - 100000	86	54		
lac – 5 lac	27	17		
Over 5 lac	19	11		
Total	160	100		

Table 2: Regression Analysis

Table 2: Regression Analysis							
	Unstand	dardized	Standardized				
Variable		Coefficients	Coefficients	t	Sig.		
	В	Std. Error	Beta				
Overconfidence bias	2.562	.776		3.299	.001		
Investor Sentiment	.126	.147	.171	2.852	.006		
Availability bias	.013	.085	.112	2.152	.009		
Anchoring and Adjustment							
Bias	.041	.074	.148	2.559	.007		
Heuristics Bias	.262	.075	.295	3.495	.001		

**Table 3. Hypothesis Testing** 

Tuble 3. Hypothesis Testing					
Hypothesis		Result			
"Overconfidence bias has a positive impact on mutual fund investment decision making"	.001	Accepted			
"Investor sentiment bias has a positive impact on mutual fund investment decision making"	.006	Accepted			
"Availability bias has a positive impact on mutual fund investment decision making"	.009	Accepted			
"Anchoring and Adjustment bias has a positive impact on mutual fund investment decision	.007	Accepted			
making"					
"Heuristics bias has a positive impact on mutual fund investment decision making"	001	Accepted			

Hypothesis 1 has been accepted. The aforementioned conclusion aligns with the outcomes of studies conducted by Metawa et al. (2019), Bakar and Yi (2016) and Lim (2012), which indicate that overconfidence exerts a notable and favourable influence on the process of making investment decisions. This implies that investors who perceive themselves as highly competent are more likely to engage in active trading of stocks within the capital market due to their confidence and tendency to underestimate dangers. The individuals in question perceive themselves as astute players within the realm of the capital market, harbouring the belief that they possess the ability to achieve superior returns. Overconfidence refers to the inclination of decision-makers operating on an unconscious level to assign an undue level of importance to the knowledge and

accuracy of the information at their disposal. The phenomenon of overconfidence can be considered a manifestation of irrational behaviour since it deviates from the principles of rational decision-making, which involve the assessment and pursuit of the highest predicted benefit. According to Pitz (1974), individuals who exhibit overconfidence tend to overestimate their own expertise and underestimate the amount of difficulty associated with tasks, leading them to overlook ambiguity. Consequently, those with high levels of overconfidence possess a belief in their ability to successfully conquer or resolve any given challenge.

Hypothesis 2 has been accepted. The aforementioned findings provide further evidence for the prior study conducted by Metawa et al. (2019), which concluded that investor sentiment had a favourable impact on the process of making investment decisions. This finding suggests that investors' decision-making process is impacted by their confidence in the future cash flows of a firm, even in the absence of substantial support from fundamental accounting facts. The phenomenon of overconfidence is strongly associated with an elevated degree of optimism or pessimism exhibited by investors in relation to specific equities and overall market circumstances. This study provides evidence supporting the significance of fluctuations in investor mood as a market risk factor that contributes to systemic risk. It highlights the importance of including this factor in portfolio management and investment decision-making processes.

Hypothesis 3 has been accepted. The findings of this study are consistent with the research conducted by Metawa et al. (2019), which demonstrates a favourable correlation between availability and investment decision-making. This suggests that investors exhibit a systematic tendency to overreact to unanticipated information that enters the capital market, resulting in an exaggerated response at a certain point in time. Hence, it is evident that investors exhibit deviations from complete rationality while making investment decisions, as they have been seen to have a propensity to disproportionately weigh good or bad news, resulting in significant fluctuations in stock values.

Hypothesis 4 has been accepted. The utilisation of anchoring and adjustment techniques has been empirically demonstrated to yield favourable outcomes in the context of investment ecision-making. This finding is consistent with the study conducted by Waweru et al. (2008), which showed that herding behaviour may positively influence individuals' decision-making processes regarding stock investments and contribute to the creation of market momentum. According to the findings of Waweru et al. (2008), it was determined that the decisions made by others had a considerable impact on an investor's choices about purchasing and selling. According to Chang et al. (2000), there is a higher prevalence of anchoring and adjustment behaviour in emerging markets. Anchoring and adjustment behaviour is a prevalent error observed among investors, wherein they prefer to align their investment selections with the prevailing consensus. This tendency has significant implications for the subsequent modifications made to investment choices (Gozalie and Anastasia, 2015). Anchoring and adjustment behaviour is commonly observed during periods of stock market decline, as investors tend to collectively sell their shares due to concerns about potential financial losses. Conversely, a similar pattern may be observed when the market is experiencing an upward trend, as investors may be inclined to retain or acquire additional shares.

Hypothesis 5 has been accepted. The findings of this study align with the prior research conducted by Chaudary (2018) and Yalcin et al. (2016), which demonstrate a favourable impact of heuristic bias on investment decision-making. This implies that investors exhibit a preference for allocating their investments towards firms that possess superior market presence, since such a strategy tends to engender heightened levels of confidence and optimism. Furthermore, it might be argued that investors demonstrate a lack of total rationality by employing heuristics, such as opting to invest in widely recognised stocks. Therefore, this study provides empirical evidence that supports the heuristic hypothesis, which posits that irrational investors rely on heuristics when making decisions. This can be attributed to the tendency of those who are illogical to not get comprehensive information. Individuals often employ shortcuts to simplify their decision-making process.

### **Conclusion**

The findings indicate that cognitive behaviour, heuristic behaviour, and investor attitude have a notable influence on mutual fund investing decision-making in India.

Investors are required to engage in investment decision-making processes when they opt to allocate their funds towards various assets. Investors are obligated to make investment selections that are optimal in nature. Therefore, it is crucial for investors to do in-depth data analysis prior to making any choices (Puspitaningtyas, 2013). Investment decision-making has been the subject of several theories, including classical financial theory and contemporary financial theory concerning financial behaviour. Concerning the efficient market hypothesis, which is central to classical finance theory, is the topic at hand. Investors constantly make rational judgements, according to the Efficient Market Hypothesis, and market prices correctly reflect all relevant information. Fundamental analysis is a concept that is closely associated with classical financial theory. However, contemporary financial theory has demonstrated that investors may have difficulties making rational decisions due to the presence of behavioural biases. Behavioural biases arise as a result of the constrained capacity of investors to engage in technical and fundamental analysis (Krishnamurti, 2009).

The significance of comprehending the elements that impact individuals' investment decision-making should be emphasised in relation to the occurrence of a market collapse and the unappealing yields on stock investment in the Indian mutual fund, which are in accordance with the sell-off by investors. Empirical research has demonstrated that investors do not consistently exhibit rational behaviour since investing decisions are influenced by behavioural factors as well. According to Metawa et al. (2019) findings, several behavioural elements have been identified as influential in shaping investing decisions. These factors include investor mood, overconfidence, overreaction, and herding behaviour. Furthermore, the studies conducted by Yalcin et al. (2016) and Chaudary (2018) have demonstrated that the concept of salience plays a significant role in shaping individuals' investment decision-making processes.

This study has various implications since it highlights the importance of behavioural aspects in investment decision-making. The use of behavioural finance by a central bank in the education of public investment aims to enhance the decision-making process of individual investors and mitigate the influence of biased behaviour. Furthermore, it is important to incorporate behavioural considerations while formulating policies pertaining to the safeguarding of investor protection rights and ensuring the stability and efficiency of the mutual fund market. Moreover, it is imperative to enhance consumer understanding regarding the ramifications of biased behaviour in stock investing and offer more dependable advice and assistance to investors in formulating a sound investment plan.

The investor has the ability to stay informed about the most recent developments pertaining to elements that have the potential to influence sentiment, such as macro policies, analogous industry policies, and central bank policies. Subsequently, the formulation of an investment strategy includes establishing a set of criteria to guide the selection of companies for inclusion in a portfolio as well as determining the conditions that dictate the choice to purchase or divest stocks. Moreover, it is advisable to regularly adjust the portfolio in accordance with the investor's specific investment goals and to minimise excessive buying and selling activities. Investors have the opportunity to mitigate subjectivity by engaging in discussions with other investors who are deemed to be more dependable. Moreover, investors have the option to diversify their portfolios in order to mitigate anomalies resulting from salient behaviour and reduce overall risks. This study aims to assist investors in making informed decisions on mutual fund investing instruments, thereby minimising the likelihood of costly errors resulting from heuristic biases. In order to mitigate cognitive biases stemming from behavioural elements, it is imperative to adopt a targeted investing plan that effectively manages mental errors made by investors.

# References

- 1. Arora, M. and Kumari, S. (2015). Risk taking in financial decisions as a function of age, gender: Mediating role of loss aversion and regret. International Journal of Applied Psychology,7.
- 2. Bakar, S., and Yi, A. N. (2016). The Impact of Psychological Factors on Investors' Decision Making in Malaysian Stock Market: a Case of Klang Valley and Pahang. *Procedia Economics and Finance*, 319-328.
- 3. Chandra, A. (2008, December) 'Decision making in the stock market: Incorporating psychology with finance', In *National Conference on Forecasting Financial Markets of India*.
- 4. Chaudary, S. (2018). Does Salience Matter in Investment Decision? Differences Between Individual and Professional Investors. *Kybernetes*.
- 5. Chang, E. C., Cheng, J. W., and Khorana, A. (2000). An Eximination of Herd Behavior in Equity Markets: An International Perspective. *Journal of Banking and Finance*, 1651-1679.
- 6. Charles A., Kasilingam Dr. R. (2014) 'Do framing effects of investors determine their investment personality?', *Anvesha, The Journal of Management*, Vol.7, No.2, pp.38-45
- 7. Christanti, N., dan Mahastanti, L. A. (2011). Faktor-faktor yang Dipertimbangkan Investor dalam Melakukan Investasi. *Jurnal Manajemen Teori dan Terapan*, 37-51.
- 8. Culters, D. M., Poterba, M. J., & Lawrence, H. S. (1989). What Move Stock Price, The Journal of Portfolio Management, 15.
- 9. De Bondt, W. F. M., & Thaler, R. H. (1995). Chapter 13 Financial decision-making in markets and firms: A behavioral perspective. In Handbooks in Operations Research and Management Science (Vol. 9, pp.385–410). Elsevier.
- 10. Duttle, K. (2015). Cognitive Skills And Confidence: Interrelations With Overestimation, Overplacement and Overprecision. Bulletin of Economic Research, 68.
- 11. Gamage, R., Wijekumara, N., & Sugathadasa, K. (2021). The Impact of Behavioral Factors on Individual Investment Decisions of Equity Investors: A Study in Kurunegala Area. Proceedings of the Annual Emerging Financial Markets and Policy Conference EFMP, 47–48.
- 12. Gozalie, S., dan Anastasia, N. (2015). Pengaruh Perilaku Heuristics dan Herding terhadap Pengambilan Keputusan Investasi Properti Hunian. *Finesta*, 28-32.
- 13. Glaser, M., and Weber, M. (2007). Overconfidence and Trading Volume. *The Geneva Risk and Insurance Review*, 1-36.

- 14. Ishfaq, M. & Anjum, N. (2015). Effect of anchoring bias on risky investment decision: Evidence from Pakistan equity market. 14, 1–9.
- 15. Ivada, W. (2010). *Pengaruh Kompetensi Investor dan Overconfidence terhadap Frekuensi Perdagangan*. Surakarta: Universitas Sebelas Maret.
- 16. Kaur, P, Virani, Dr. S, and Fazalbhoy, Prof. S.(2016) 'Psychological traits and demographic factors do they affect investor's behavior?', *Indian Journal of Management Science*Vol.VI, No.1, pp.46-53.
- 17. Khan, M.Z.U. (2015). Impact of availability bias and loss aversion bias on investment decision making, moderating role of risk perception. 1(2).
- 18. Kubilay, B., & Bayrakdaroglu, A. (2016). An Empirical Research on Investor Biases in Financial Decision-Making, Financial Risk Tolerance and Financial Personality. International Journal of Financial Research, 7(2), p171.
- 19. Krishnamurti, C. (2009). *Investment Management: A Modern Guide to Security Analysis and Stock Selection*. Heidelberg: Springer.
- 20. Kengatharan, L., & Kengatharan, N. (2014). The Influence of Behavioral Factors in Making Investment Decisions and Performance: Study on Investors of Colombo Stock Exchange, Sri Lanka. Asian Journal of Finance & Accounting, 6(1), 1.
- 21. Larrick, R., Burson, K., & Soll, J. (2007). Social Comparison and Confidence: When Thinking You're Better than Average Predicts Overconfidence (and when it does not). Organizational Behavior and Human Decision Processes, 102, 76–94.
- 22. Luong, L. P., and Ha, D. T. (2011). Behavioral Factors Influencing Individual Investors' Decision-Making and Performance a Survey at The Ho Chi Minh Stock Exchange. *Asian Journal of Finance and Accounting*, 15-28.
- 23. Pak Olga and Mahmood M. (2013) 'Impact of personality on risk tolerance and investment decisions: A study on potential investors of Kazakhstan', *International Journal of Commerce and Management*, Vol.25, No.4, pp. 370-384.
- 24. Odean, T. (1999). Do Investors Trade Too Much? The American Economic Review, 89(5), 20.
- 25. Massa, M., & Simonov, A. (2005). Behavioral Biases and Investment. Review of Finance, 9(4), 483-507.
- 26. Metawa, N., Hassan, M. K., Metawa, S., and Safa, M. F. (2019). Impact of Behavioral Factors on Investors' Financial Decisions: Case of The Egyptian Stock Market. *Interantional Journal of Ismlamic and Middle Eastern Finance and Management*, 30-55.
- 27. Ngoc, L. T. B. (2013). Behavior Pattern of Individual Investors in Stock Market. International Journal of Business and Management, 9(1), p1.
- 28. Pitz, G. F. (1974). Subjective Probability Distributions for Imperfectly Known Quantities.
- 29. Pompian, M. M. (2006). Behavioral Finance and Wealth Management (How to Build Optimal Portfolio That Account for Investor Biases). 1st ed., 339.
- 30. Puspitaningtyas, Z. (2013). Perilaku Investor dalam Pengambilan Keputusan Investasi di Pasar Modal. *Prosiding Seminar Nasional dan Call for Paper Forum Manajemen Indonesia*.
- 31. Shefrin, H. (2000). Beyond greed and fear: Understanding behavioral finance and the psychology of investing (1. issued as an Oxford Univ. Pr. paperback). Oxford Univ. Press.
- 32. Statman, M., Thorley, S., & Vorkink, K. (2006). Investor Overconfidence and Trading Volume. *Review of Financial Studies*, 19, 1531–1565.
- 33. Tversky, A., & Kahneman, D. (1974). Judgment under Uncertainty: Heuristics and Biases. 185, 10.
- 34. Waweru, N., Munyoki, E., & Uliana, E. (2008). The effects of behavioural factors in investment decision-making: A survey of institutional investors operating at the Nairobi Stock Exchange. *International Journal of Business and Emerging Markets*, 1, 24–41.
- 35. Yalcin, K. C., Tatoglu, E., & Zaim, S. (2016). Developing an instrument for measuring the effects of heuristics on investment decisions. *Kybernetes*, 1052-1071