

Impact of Behavioural Biases on Investment Decision-Making: Evidence from Investors

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Abstract

The objective of this study is to investigate how behavioural biases affect the decisions that individual investors make when making investments. To address the objective, researchers used a sample of 201 individual investors as the primary data source. The data was collected using an online survey utilising a convenience sampling approach and analysed using Partial Least Squares (Smart-PLS). The study found that Anchoring Bias, Endowment Effect and Loss Aversion substantially impact investors' decision-making, resulting in the overvaluation of assets and the avoidance of prospective losses. Failure to overcome these biases might result in making less-than-ideal decisions. The Ambiguity Effect does not substantially influence investing choices, indicating that investors give more importance to familiar biases and risks rather than ambiguity. Financial professionals must acknowledge and comprehend these biases to develop tactics that lead to better-informed investment choices and enhanced results. This research lies at the intersection of cognitive biases in behavioural finance with financial decisions made by individual investors, contributing to developing a theoretical framework. The four behavioural biases that are most frequently seen have been included in this research. Therefore, the discoveries may be advantageous to individual investors in enhancing their financial decision-making process by mitigating these biases and fostering a more comprehensive comprehension of them. Subsequent researchers should examine the influence of other biases and investigate their effects on institutional investors.

Keywords: Ambiguity Effect, Anchoring Bias, Endowment Effect, Loss Aversion Bias, Investment Decisions, Individual Investors

Introduction

The economy and the industrial sector are currently impacted by the fast advancement of technology. A consumer may simply and quickly obtain many things online without visiting the business that supplies the products. Humans' limitless demands and desires increase as a result. The increasing demand for technical advancements may make an individual's income insufficient to meet their needs. People need to handle their finances wisely in order to be able to overcome this issue (Aini & Lutfi, 2019). They may endeavour to satisfy their own desires and needs in addition to their fixed income from investments. Allocating funds for low-risk assets like savings and deposits and high-risk assets like gold and real estate is the process of making an investment decision (Barber & Odean, 2001; Keller & Siegrist, 2006).

Traditional investing theories assume that investors strive to optimise their earnings. The majority of the studies have shown that investors do not always exhibit logical behaviour (Atlaf & Jan, 2023). Individuals experience complexity when confronted with ambiguity in financial decision-making. Inconsistent market operations often result in the absence of rationality and logical reasoning. Behavioural finance studies prospective solutions to individuals' illogical behaviour (Shukla et al., 2024) and is a field within finance that examines the behaviour of financial market players and the impact of psychological variables on their choices to buy or sell assets, thereby influencing market prices (Brockman et al., 2023). Behavioural finance is an emerging discipline in finance that aims to include behavioural variables in decision-making processes alongside fundamental finance principles (Shukla et al., 2024).

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Numerous behavioural and psychological factors, as well as demographic factors, impact financial decisions (Aren et al., 2016). On the basis of demographic factors, Kulkarni (2014) carried out research to investigate the perceptions of investors. Human beings are constrained by their knowledge and interpretive capacities, necessitating their reliance on simplifications to facilitate decision-making (Banerji et al., 2023). These cognitive shortcuts, called heuristics, might not help people make the best choices, but they help them make wise decisions. Investment decisions made by one investor will not be the same as those made by another. Financial strategy, risk tolerance and psychological objectives contribute to this variance. Psychological considerations significantly shape an investor's decision-making process, leading to variations in investing choices across different individuals (Firmansyah et al., 2023). Behavioural biases are cognitive abnormalities that may influence an investor's decision-making process, resulting in illogical choices and hindering the achievement of investing objectives (Kapoor & Prosad, 2017). Behavioural biases are instruments for comprehending deviations from the rationality principles in economic fundamentals while making investment choices. These biases cause illogical behaviour among investors, which hampers the growth potential (Gupta & Shrivastava, 2021). It is widely recognised that comprehending the influence of these biases on investors' psychology is crucial, especially in contemporary times. By directing attention toward these biases, individual investors may enhance their performance by effectively overcoming and avoiding subsequent errors in judgement (Sahi, 2012; Shabarisha, 2015). There has been a substantial rise in investors who strongly prefer a few investment options and tend to disregard all other alternatives owing to internal biases (Gupta & Shrivastava, 2021). Given the heightened quantity, it is now essential to comprehend the mind-set of investors, as they are creating an unforeseen surge of momentum in the market. In conclusion, this study examines the substantial influence of behavioural biases on investment decision-making using empirical data from individual investors. Researchers want to create a better understanding of how cognitive biases influence financial decisions by examining these psychological inclinations, which will ultimately lead to more educated investing strategies and policy-making. In addition to bridging the knowledge gap between academic theories

and practical applications, this research will provide insightful information for investors looking to maximise their decision-making procedures.

Literature Review and Hypotheses Development

The behavioural finance theory, derived from psychology, aims to comprehend the impact of emotions and cognitive errors on the investment behaviours of individual investors (Kengatharan & Kengatharan, 2014). Behavioural finance originates from cognitive psychology, which investigates individuals' thought processes, reasoning mechanisms and decision-making, including investors (Bakar & Yi, 2016). Behavioural Finance and Modern Portfolio Theory (MPT) provide conflicting investor decision theories. Representatives of the former emphasise its capacity to stimulate financial markets' functioning in reality accurately (Owusu and Laryea (2023), and the latter offers a theoretical perspective on the optimal functioning of markets (Lo, 2004).

Ambiguity Effect and Investment Decisions

The ambiguity effect is where individuals prefer options with known probabilities and avoid options with uncertain outcomes (Einhorn & Hogarth, 1986). This preference persists even when the uncertain option has the potential for higher returns. Within investment decision-making, this cognitive bias can cause investors to choose familiar and conventional opportunities instead of innovative but ambiguous ones (Zahera & Bansal, 2018). This bias can potentially result in missed opportunities for portfolio growth, as highlighted by Levy and Levy (2002). Moreover, when market conditions are uncertain or financial products are complex, investors may avoid making decisions altogether (Huang, 2018). They may instead prefer to remain inactive, perceiving it as a safer option (Hsee & Weber, 1999). The resolution of the ambiguity effect is of utmost importance for investors to enhance the quality of their decision-making process by incorporating more accurate and logical judgements. Despite its importance in decision theory and behavioural economics, the ambiguity effect has not received much attention in the study of investment decisions. Investors have the potential to mitigate the impact of bias and improve investment outcomes by implementing strategies

such as conducting thorough research, diversifying their investments and seeking expert advice. Additional research is necessary to enhance our comprehension of the impact of the ambiguity effect on investment decisions and to formulate more efficient strategies for minimising its effects. This indicates a significant gap in the current literature (Ellsberg, 1961). There is a lack of research specifically investigating the implications of the ambiguity effect on investment decision-making and its potential impact on financial markets (Eidizadeh et al., 2024). Therefore, further research is needed to address this gap.

H1: Ambiguity Effect will affect Investment Decisions.

Anchoring Bias and Investment Decision

(Donkor et al., 2016) found that the presence of anchoring has a beneficial impact on investment decision-making. The survey revealed that 82% of participants attributed their current investing decisions to their prior success, highlighting a positive correlation between past performance and investment decisions, with participants using past portfolio success to achieve higher returns. Mahalakshmi and Anuradha (2018) conducted a study on the impact of behavioural biases, amount of involvement and spouse influence on investing decision-making. A weak correlation was observed between anchoring and investing decisions. On the other hand, (Mer & Vishwakarma, 2024) examined the impact of heuristic bias on investors' decision-making processes about investments. Studying heuristic biases is crucial since these biases might result in variations from rational decision-making. The research indicated that investors' investing choices are significantly influenced by adjustment and anchoring bias. Prior research has examined the correlation between anchoring and investment decision-making. Much research has shown a strong and positive correlation between anchoring and investing decision-making. This conclusion is confirmed by (Donkor et al., 2016; Gitau et al., 2019; Khan et al., 2017; Madaan & Singh, 2019).

H1: Anchoring Bias will affect Investment Decisions.

Endowment Effect and Investment Decisions

The tendency for people to place an item's worth higher after they own it than they would have if they didn't

own it is known as the endowment effect. This leads to a reluctance to relinquish or exchange the asset (Yi, 2024). This notion is significant in financial economics regarding asset pricing, market efficiency and investor behaviour. The endowment effect is a widely recognised concept in the field of behavioural finance and has received considerable attention in the context of investment decision-making. Numerous studies have been conducted to investigate the implications of this phenomenon on financial markets, which have consistently shown its significant impact on investor behaviour (Kahneman, Knetsch & Thaler, 1991). Nevertheless, few studies have explicitly looked at the endowment effect in the context of investing decision-making despite its importance. It indicates an absence in the corpus of existing literature. This gap indicates the necessity for additional research to gain a comprehensive understanding of the extent to which the endowment effect influences financial markets and to devise more efficient strategies for minimising its effects. According to research, evidence suggests that individuals tend to irrationally assign a higher value to assets they already own. This can result in biased decision-making when it comes to investments. The observed phenomenon presents itself through several manifestations, including a tendency to hold onto investments that are performing poorly, a preference for assets that are familiar and an overestimation of the value of these assets (Barber & Odean, 2000; Thaler, 1980). The presence of these tendencies has the potential to negatively impact portfolio performance and impede investors from fully optimising their returns. It has been emphasised by scholars that it is important to comprehend and address the effects of the endowment effect in order to encourage more rational investment strategies. Investors can potentially mitigate the impact of cognitive bias and make more informed financial decisions by implementing diversification techniques, regularly reviewing portfolios and seeking professional advice.

H1: Endowment Effect will affect Investment Decisions.

Loss Aversion Bias and Investment Decision

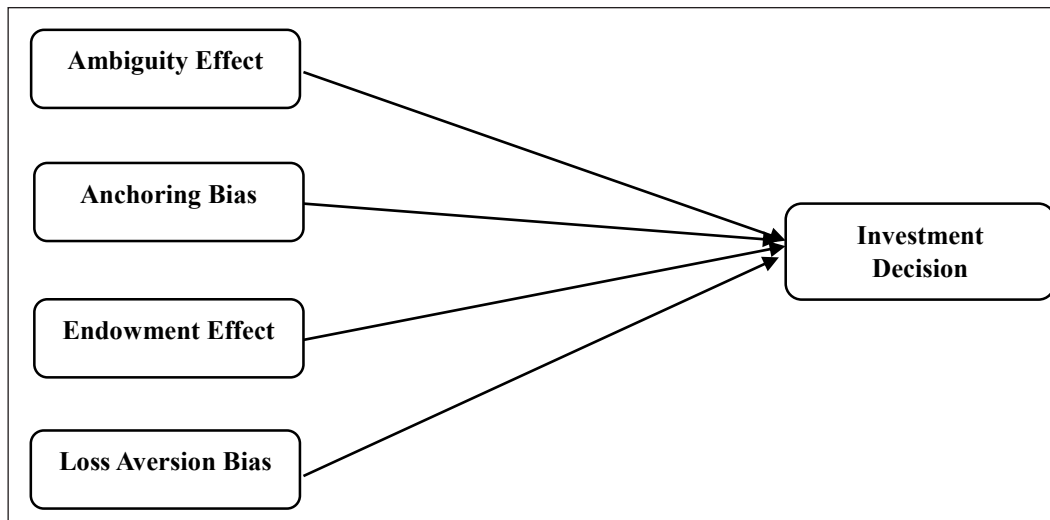
Loss aversion is a crucial factor in influencing investor behaviour in financial decision-making, as shown by a comprehensive analysis of relevant literature. Jain et al. (2019) emphasise that people often prioritise safeguarding their current financial assets rather than seeking

prospective income growth, highlighting the significant impact of loss aversion on economic behaviour. Kostin et al. (2021) support this opinion by quantifying the effect of loss aversion, indicating that it has double the impact on decision-making processes compared to the potential for gains. Loss aversion, as explained by Vijaya (2016), is a psychological phenomenon where the emotional effect of losses is far more significant than similar profits. This leads to a cautious attitude to investing. Hala et al. (2020) identified three leading indicators that demonstrate a cautious approach: the expectation of guaranteed investment returns, caution towards potential negative changes and a deep understanding of investment

performance. Tripathi and Chattopadhyay (2013) examined the behavioural characteristics of individual investors in equities mutual funds and found that voluntary risk-taking and financial awareness characterise the investment's risk profile.

These indicators suggest that individuals who are averse to losses are more likely to be risk-averse. These studies collectively enhance our understanding of loss aversion, highlighting its significant effects on investor behaviour, specifically concerning evaluating risks and being hesitant in making decisions.

H1: Loss Aversion will affect Investment Decisions.



Source: Authors compilation.

Fig. 1: Research Framework

Research Methodology

This study investigates how behavioural biases affect the decisions that individual investors make about their investments. The primary objective of this study is to collect data from individual investors. The researcher utilised primary data gathered through a structured questionnaire and convenience sampling. The questionnaire was distributed using Google Forms. Since this strategy selects readily available research volunteers, it is considered a valid selection procedure. A total of 250 Likert scale questionnaires were sent to individual investors to gather information. 201 investors were chosen from among them to take part in the study. Respondents must tick one of the following options on

the questionnaire: “Strongly Disagree”, “Disagree”, “Neutral”, “Agree”, “Strongly Agree”. We will be concentrating on five distinct areas: investment decisions, loss aversion, endowment impact, ambiguity effect and anchoring effect in order to examine the relationship between the variables and their consequences. Examining the relationships between the variables under consideration and the relationships between the independent variables is the aim of this study. The Smart PLS approach will be chosen for the structural model in this investigation. Advanced data analysis techniques include Structural Modelling (SM) and Partial Least Squares (PLS). PLS is a statistical approach primarily focusing on quantifying the variability and predicting the parameters? It aims to minimise the residual variance (Hair et al., 2019).

Data Analysis and Interpretation

To investigate the suggested research hypotheses, the partial least squares structural equation model (PLS-SEM) was used to analyse the data set. As part of the first phase of the study, the model was evaluated to ensure the accuracy of the measurements of the constructs. This was accomplished by examining the model's internal consistency reliability, convergent validity and discriminant validity. The next step was to test the structural model's predictive power and path coefficient. In addition, 5000 bootstrap subsamples were used to determine the significance of route coefficients for hypothesis testing at a 5% significance level (Sarstedt et al., 2017).

Table 1: Demographic Profile of the Respondents

<i>Characteristic</i>	<i>Frequency</i>	<i>Percent</i>
Gender		
Male	123	61.2
Female	78	38.8
Total	201	100
Age (In Years)		
18-25	81	40.3
26-35	96	47.8
36-45	19	9.5
46-55	05	2.5
Above 56	00	00
Total	201	100
Qualifications		
10 th	1	0.5
12 th	10	5.0
Graduation	61	30.3
Postgraduation	105	52.2
Professional	15	7.5
Other	09	4.5
Total	201	100
Occupation		
Student	99	49.3
Business	33	16.4
Employment/ Services	57	28.4
Profession	09	4.5
Other	03	1.5
Total	201	100

<i>Characteristic</i>	<i>Frequency</i>	<i>Percent</i>
Income		
Less than 50000	122	60.7
50000-100000	33	16.4
100000-150000	18	9.0
150000-200000	09	4.5
More than 2000000	19	9.5
Total	201	100

Source: Compiled by authors.

Table 1 provides descriptive statistics, computed using SPSS, for the respondent's profile. Results showed that 61.2% of the respondents were male, and 38.8% were female. The most significant proportion of respondents (47.8%) fell between the ages of 26-35 years, while 40.3% belonged to the age group 18-25 years. Young investors are more actively engaging in investment activities than older individuals due to their greater accessibility to readily accessible information. Most respondents (52.2%) were classified as postgraduates, while the second largest group of participants (30.3%) fell into the graduate category. The results revealed that 49.3% of participants are students, indicating a strong focus on education and skill acquisition among the surveyed population, followed by (28.4%) of respondents related to employment and services. The respondent's income distribution shows different socioeconomic levels; most respondents (60.7%) reported having an income of less than INR. 50,000.

Table 2: Outer Loadings, Composite Reliability and AVE

<i>Construct</i>	<i>Items</i>	<i>OL</i>	<i>CR</i>	<i>AVE</i>
Ambiguity Effect	AME1	0.828	0.883	0.604
	AME2	0.818		
	AME3	0.828		
	AME4	0.752		
	AME5	0.644		
Anchoring Effect	ANE1	0.7	0.843	0.517
	ANE2	0.713		
	ANE3	0.731		
	ANE4	0.726		
	ANE5	0.725		
Endowment Effect	EE1	0.707	0.887	0.611
	EE2	0.817		
	EE3	0.769		

Construct	Items	OL	CR	AVE
Loss Aversion	EE4	0.808		
	EE5	0.802		
	LA1	0.734	0.879	0.592
	LA2	0.759		
	LA3	0.824		
Investment Decision	LA4	0.796		
	LA5	0.73		
	ID1	0.706	0.884	0.605
	ID2	0.791		
	ID3	0.819		
	ID4	0.799		
	ID5	0.769		

Source: Compiled by authors.

Table 2 presents the outer loading values, composite reliability (CR) and average variance extracted (AVE) for all variables in a straightforward manner. The benchmark data demonstrate that all variables have loading levels above 0.60. Furthermore, the Composite Reliability above the barrier of 0.70 indicates a high-reliability level. Similarly, the AVE exceeds the recommended value of 0.50, which is considered the minimum need for further investigation. The convergent validity and internal consistency of the measurement model were validated by this evaluation (Hair et al., 2019).

Table 3: Heterotrait-Monotrait Ratio

	AME	ANE	EE	ID	LA
ANE	0.763				
EE	0.466	0.643			

	AME	ANE	EE	ID	LA
ID	0.615	0.72	0.665		
LA	0.702	0.732	0.546	0.833	

Source: Compiled by authors.

Table 4: Fornell-Larcker Criterion

	AME	ANE	EE	ID	LA
ANE	0.777				
EE	0.602	0.719			
ID	0.39	0.523	0.782		
LA	0.526	0.589	0.564	0.778	

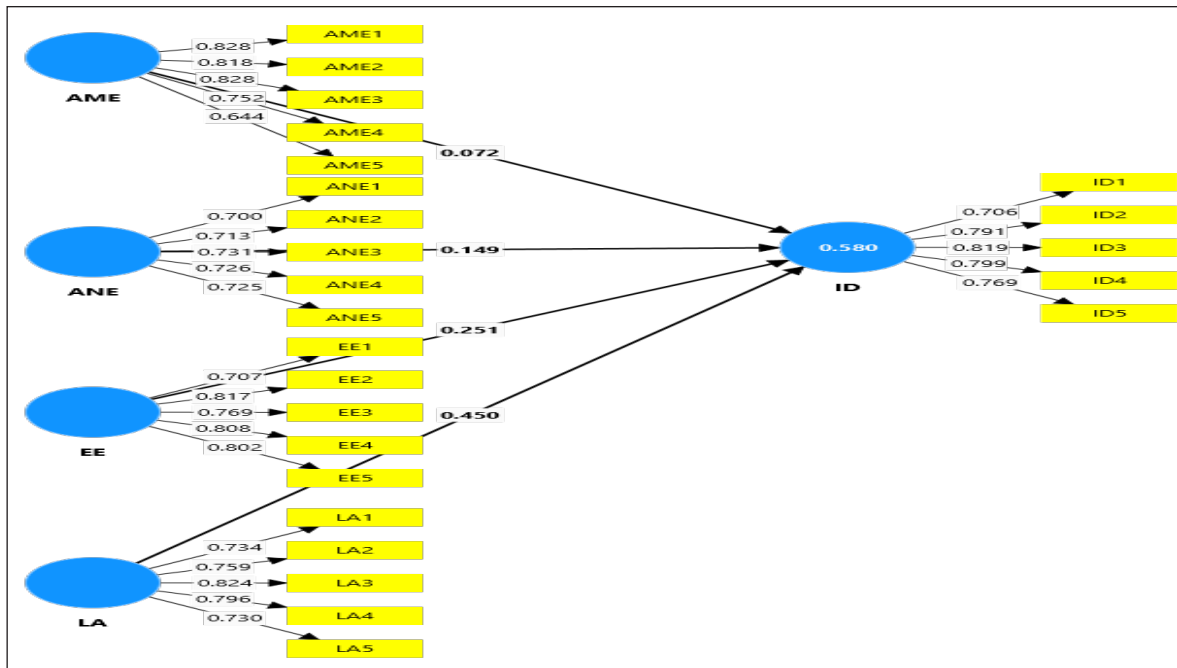
Source: Compiled by authors.

The distinct characteristics of each construct item are elucidated using discriminant validity. We utilise the Heterotrait-Monotrait ratio and Fornell-Larcker criterion to assess the discriminant validity. Ratios less than 0.85 suggest that discriminant validity is suitable (Hair et al., 2020; Henseler et al., 2015). The correlation between a construct and other constructs, which should be less than the square root of the AVE of that construct, was one of the additional criteria put out by (Fornell & Larcker, 1981; Hair et al., 2019). According to Table 3, all of the HTMT values are lower than the 0.85 criteria. So, lower HTMT ratios are positively correlated with increased discriminant validity. Table 4 displays the results of the discriminant validity evaluation, which indicate that the components met the criteria proposed by Fornell and Larcker (1981), indicating that discriminant validity was obtained.

Table 5: Model Estimation Results

Hypothesis	Path Coefficients	SD	T Statistics	P Values	Supported
AME-> ID	0.072	0.070	1.037	0.150	No
ANE->ID	0.149	0.066	2.252	0.012	Yes
EE->ID	0.251	0.065	3.845	0.000	Yes
LA->ID	0.450	0.077	5.846	0.000	Yes

Source: Compiled by authors.



Source: Primary data results.

Fig. 2: Analysis of Structural Model

The findings of the overall hypothesis testing are in Table 5 indicates that the Ambiguity Effect does not significantly impact investment decisions ($\beta_1 = 0.072$, $t\text{-stat} = 1.037$, $p > 0.05$). Therefore, the first hypothesis (H1) is rejected. Meanwhile, ANE ($\beta_1 = 0.149$, $t\text{-stat} = 2.252$, $p < 0.05$), EE ($\beta_1 = 0.251$, $t\text{-stat} = 3.845$, $p < 0.05$), LA ($\beta_1 = 0.450$, $t\text{-stat} = 5.846$, $p < 0.05$) positively impacting investment decisions. Thus, hypotheses H2, H3 and H4 are accepted.

Table 6: Model Evaluation

Construct	R-Squared	R-Square Adjusted
Investment Decisions	0.58	0.572

Source: Compiled by authors.

The R-squared values in this model are shown in Table 6 and are classed as moderate (0.58), which aligns with the suggestion made by Hair et al. (2014) that an R-squared value of 0.5 may be considered moderate. The present study indicates that the exogenous latent variables (AME, ANE, EE, LA) have the ability to explain 58% of the Investment Decision (ID) as an endogenous variable. The remaining 42% is accounted for by other factors outside the scope of the investigation.

Discussion and Conclusion

Considering various investment options, individuals often grapple with a fundamental question: What is the optimal plan for investing in financial instruments, and to what extent can past stock market price movements be utilised to predict future price movements? (Shukla et al., 2024). Given the assumption of rationality, it seemed that investors would opt for financial instruments that maximise gains and minimise losses. Investment behaviour is often a mix of rational and irrational decision-making (Madaan & Singh, 2019). Behavioural finance examines the irrational aspects of human behaviour when making investment decisions. (Antony, 2022) discussed numerous behavioural elements and biases influencing investors' decision-making processes. This illustrates the irrational behavioural traits of investors, which contradict logical thinking. This study suggests that cognitive biases hinder investors from achieving full rationality while making investing decisions. These risks and uncertainties are influenced by a variety of behavioural biases. The behavioural biases under consideration primarily pertain to the behaviour of investors and their decision-making process

when making investments (Kumar & Goyal, 2015). Behavioural biases are fundamental to behavioural finance, which synergistically integrates individual behaviour and market phenomena (Banerji et al., 2022). Within the domain of behavioural finance, a variety of biases are present. This study considers four biases: the Ambiguity Effect, Anchoring Bias, Endowment Effect and Loss Aversion Bias.

Our research analysis indicates that the Anchoring Effect (Bouteska & Regaieg, 2020; Rahahleh, 2024), the Endowment Effect (Bao & Gong, 2016; Holden & Tilahun, 2021) and Loss Aversion Bias (Aini & Lutfi, 2019; Rauf et al., 2018) have pronouncedly favourable effects on the process of making investment decisions. Still, the Ambiguity Effect has no discernible impact. The Anchoring Effect demonstrates how investors frequently place great weight on preliminary data, which may cause biases in later choices. The Endowment Effect suggests that investors frequently overvalue their assets, which can lead to emotionally charged decision-making that is not advisable. Most importantly, Loss Aversion Bias shows that investors' investment behaviour is greatly influenced by their strong propensity to avoid losses over obtaining similar returns (Firmansyah, 2023). These results underscore the significance of cognitive biases in influencing investor behaviour Aren et al. (2016) and the necessity of techniques to lessen their influence, improving the efficacy (Pompian, 2012) and rationality of investment decision-making procedures (Bouteska & Regaieg, 2020).

Future Scope of the Study

Several behavioural biases influence investors' decision-making. Due to many uncertainties in the decision-making process, every choice has inherent risks. However, investors often underestimate this risk due to biases. Therefore, this study's findings provide a valuable understanding of how selected behavioural biases affect the investment decision-making behaviour of individual investors.

Several recommendations for future studies in behavioural finance and investment decision-making have been derived from the findings of this study. The sample size of this study, which examined the

influence of cognitive biases on investing decisions in the specific context of individual investors, was relatively small. With more extensive samples and a more diverse range of respondents, further research must validate the conclusions of this study. To further comprehend how psychological variables influence decisions about investments and market efficiency, we recommend using behavioural economics to investigate heuristics and other behavioural factors that impact individual investors' investment decisions and significantly impact market efficiency. This can be achieved by examining mediator and moderator variables. It is possible to evaluate how heuristics and other psychological aspects affect investments over the long and short terms. These psychological factors have the potential to impact portfolio performance and strategic planning over time, as well as short-term impulsive actions and market volatility. Investors' capacity to reach financial objectives may be improved by developing more balanced and successful investing strategies with an understanding of these consequences. Acknowledging that personal biases might differ among individuals and that tailored strategies are needed to resist them is essential. To improve our comprehension of behavioural biases and how they affect financial decision-making, multidisciplinary research and collaboration are required.

Implications of the Study

This study has numerous implications for individual investors, financial advisors, legislators and academicians. Investors may make better investing decisions and achieve better results by being aware of and taking steps to mitigate cognitive biases such as the Anchoring Effect, Endowment Effect and Loss Aversion Bias. Financial advisers may use this data to inform their customers, assisting them in making more educated decisions and directing them to clear of typical mistakes. Regulations that encourage openness and lessen the effects of biases, like the Ambiguity Effect, may be put in place by policymakers and regulators, who can also create educational initiatives to improve financial literacy. Researchers are urged to investigate the interactions between cognitive biases and their long-term impact on investing behaviour to improve

understanding and control of these biases in financial decision-making.

References

- Ainia, N. S. N., & Lutfi, L. (2019). The influence of risk perception, risk tolerance, overconfidence, and loss aversion towards investment decision-making. *Journal of Economics, Business, & Accountancy Ventura*, 21(3), 401-413. doi:https://doi.org/10.14414/jebav.v21i3.1663
- Altaf, H., & Jan, A. (2023). Generational theory of behavioral biases in investment behavior. *Borsa Istanbul Review*, 23(4), 834-844. doi:https://doi.org/10.1016/j.bir.2023.02.002
- Antony, A. (2022). Investor biases and their discriminating power among the risk takers - A case study from Kerala. *Journal of Commerce and Accounting Research*, 11(3), 26-33. http://publishingindia.com/jcar/
- Aren, S., Aydemir, S. D., & Şehitoğlu, Y. (2016). Behavioral biases on institutional investors: A literature review. *Kybernetes*, 45(10), 1668-1684. doi:https://doi.org/10.1108/K-08-2015-0203
- Bakar, S., & Yi, A. N. C. (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*, 35, 319-328. doi:https://doi.org/10.1016/s2212-5671(16)00040-x
- Banerji, J., Kundu, K., & Alam, P. A. (2023). The impact of behavioral biases on individuals' financial choices under uncertainty: An empirical approach. *Business Perspectives and Research*, 11(3), 401-424. doi:https://doi.org/10.1177/22785337221098287
- Brockman, P., He, X., Sun, S., & Zou, H. (2023). The role of individual investment bankers in IPO pricing: Evidence from investor bidding behavior. *Journal of Corporate Finance*, 82, 102431. doi:https://doi.org/10.1016/j.jcorpfin.2023.102431
- Donkor, J., Akohene, V., & Acheampong, S. (2016). Behavioural factors and investment decisions of bankers in Ghana. *British Journal of Education, Society & Behavioural Science*, 18(3), 1-8. doi:https://doi.org/10.9734/bjesbs/2016/23353
- Firmansyah, Winarno, A., & Siswanto, E. (2023). The influence of overconfidence bias, herding effect, and loss aversion on investment decisions in the capital market with financial literacy as a moderating variable. *Journal of Business and Management Review*, 4(11), 871-897. doi:https://doi.org/10.47153/jbmr411.8252023
- Gitau, G. G., Kiragu, D. N., & Kamau, R. (2019). Effect of heuristic factors and real estate investment in Embu County, Kenya. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, 8(4), 30-38. doi:https://doi.org/10.6007/ijarafms/v8-i4/5183
- Gupta, S., & Shrivastava, M. (2021). Impact of behavioral biases on investment decisions: Moderating effect of preferred sector of investment. *Ramanujan International Journal of Business and Research*, 6(1), 37. doi:https://doi.org/10.51245/rijbr.v6i1.2021.244
- Hair, J. F., Howard, M. C., & Nitzl, C. (2020). Assessing measurement model quality in PLS-SEM using confirmatory composite analysis. *Journal of Business Research*, 109, 101-110. doi:https://doi.org/10.1016/j.jbusres.2019.11.069
- Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, 31(1), 2-24. doi:https://doi.org/10.1108/EBR-11-2018-0203
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43(1), 115-135. doi:https://doi.org/10.1007/s11747-014-0403-8
- Kapoor, S., & Prosad, J. M. (2017). Behavioural finance: A review. *Procedia Computer Science*, 122, 50-54. doi:https://doi.org/10.1016/j.procs.2017.11.340
- 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). doi:https://doi.org/10.5296/ajfa.v6i1.4893
- Khan, H. H., Naz, I., Qureshi, F., & Ghafoor, A. (2017). Heuristics and stock buying decision: Evidence from Malaysian and Pakistani stock markets. *Borsa Istanbul Review*, 17(2), 97-110. doi:https://doi.org/10.1016/j.bir.2016.12.002
- Kulkarni, M. S. (2014). A study of investment behaviour based on demographics. *Journal of Commerce and Accounting Research*, 3(4), 47-54.
- Madaan, G., & Singh, S. (2019). An analysis of behavioral biases in investment decision-making. *International Journal of Financial Research*, 10(4), 55-67. doi:https://doi.org/10.5430/ijfr.v10n4p55

- Mahalakshmi T. N., & Anuradha N. (2018). Factors affecting investment decision making & investment performance among individual investors in India. *International Journal of Pure and Applied Mathematics*, 118(18), 1667-1675.
- Mer, P., & Vishwakarma, P. (2024). The impact of heuristics bias on investment decision: An empirical study. *Journal of Commerce and Accounting Research*, 13(3), 60-71. doi:<https://doi.org/10.21863/jcar/2024.13.3.007>
- Sahi, S. (2012). Neurofinance and investment behaviour. *Studies in Economics and Finance*, 29, 246-267. doi:<https://doi.org/10.1108/10867371211266900>
- Sarstedt, M., Ringle, C. M., & Hair, J. F. (2017). Partial least squares structural equation modeling. *Handbook of Market Research*, 1-40. doi:https://doi.org/10.1007/978-3-319-05542-8_15-1
- Shabarisha, N. (2015). Heuristic and biases related to financial investment and the role of behavioral finance in investment decisions - A study. *ZENITH International Journal of Business Economics & Management Research*, 5(12), 82-101. Retrieved from <https://ssrn.com/abstract=2881151>
- Shukla, A., Dadhich, M., Vaya, D., & Goel, A. (2024). Impact of behavioral biases on investors' stock trading decisions: A comprehensive quantitative analysis. *Indian Journal of Science and Technology*, 17(8), 670-678. doi:<https://doi.org/10.17485/IJST/v17i8.2845>
- Tripathi, M., & Chattopadhyay, T. (2013). Study of behavioral dimensions of perceived risk of investments of financial experts and laymen in equity mutual funds in India. *Journal of Commerce & Accounting Research*, 2(4), 10-27.
- Yi, S. (2024). Behavioral finance: Several key effects of investor decision-making. *SHS Web of Conferences*, 188, 01017. doi:<https://doi.org/10.1051/shsconf/202418801017>