

Behavioral Biases, Risk Perception, and Financial Literacy: Determinants of Investment Decision-Making across Markets

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ABSTRACT

The process of deciding which investments to make is a key element of financial planning because it requires investors to allocate their funds across investment options that they believe will yield future profits. Behavioural finance serves as a theoretical framework that researchers use to study psychological investment decision-making biases that differ from the standard predictions of traditional finance (Kahneman and Tversky, 1979; Barberis and Thaler, 2003). This study investigates how people operate by examining crucial cognitive mistakes, which include heuristics and prospect theory, emotional responses, market effects, and herding conduct, because they impact investment choices and portfolio management processes. Researchers gathered primary data through structured questionnaires, which were administered to individual BSE and NSE investors through purposive random sampling. The researchers obtained 180 complete responses, which were treated as valid data for analysis. The study found that heuristics had a positive impact on investment decision-making which reached statistical significance. The study found that prospect theory, emotions, market impact, and herding behaviour did not show any direct connection between them. The moderation analysis showed that emotions and market impact on investment decisions experienced their effects through two moderating factors: investor experience and financial literacy. Multiple conclusions can be drawn from the study results. The study found that heuristics established a direct relationship with investment decisions, while the other four examined behavioural biases did not influence the decisions. The study found that prospect theory, emotions, market impact, and herding behaviour had no impact on investment decisions, with *p* values exceeding the 0.05 threshold. The study found that investor experience and financial literacy had a minor moderating effect on emotional and trend-based decision-making which means that these two skills can help investors, but they will not solve problems that arise from automatic thought processes (Divakara Reddy et al., 2026). The study results reveal a connection between financial literacy and certain biases, including overconfidence and anchoring, while its impact on bias protection varies according to each bias category (Almansour et al., 2024; Malik et al., 2026). Investors should receive training in decision-making and advisory services which use behavioral insights to create better investment outcomes according to the study results because they hold essential value for financial educators and advisors and policymakers and stock market authorities (Divakara Reddy et al., 2026).

Keywords: Behavioral Biases, Risk Perception, Financial Literacy, Investment Decisions, Heuristics, Overconfidence, Disposition Effect, Emerging Markets

1. Introduction

The Efficient Market Hypothesis (Fama, 1970) and Modern Portfolio Theory (Markowitz, 1952) present traditional finance theories which assume that investors behave rationally while markets use all existing information to operate efficiently. Existing evidence demonstrates that investors do not exhibit rational behaviour because psychological factors cause them to make decisions which differ from rationality (Akin & Akin, 2024; Camilli et al., 2024). Behavioural finance studies financial decision-making through cognitive and emotional bias research because its origin in Prospect Theory (Tversky & Kahneman, 1979) shows how people behave economically. 1.1 Behavioural Finance and Investor Rationality Behavioural finance has developed into a key area of study which connects cognitive psychology with financial theory to explain how irrationality and emotional factors lead investors to make biased stock market choices (Tversky & Kahneman, 1974; Barberis & Thaler, 2003). The behavioural finance field develops through research activities which display its progress and work on developing existing financial research methods (Wu, 2025). Wu (2025) explains how Prospect Theory, Mental Accounting, and the Representativeness Heuristic show that people make systematic errors when they assess situations because they follow specific patterns of bias which include herding, overconfidence, and loss aversion. The author identifies recent developments, including the Adaptive Market Hypothesis (Lo, 2004), neurofinance, emotional decision-making, and behavioural financial responses in both market crashes and cryptocurrency-based asset classes.

1.2 Behavioural Biases in Emerging Markets The financial literacy level in emerging markets which include Pakistan, India, and Saudi Arabia, faces severe limitations because their regulatory frameworks do not function properly and their citizens depend on local economic practices (Madaan & Singh, 2019; Rasool & Ullah, 2020). Herathmenike et al. (2025) conducted a systematic literature review using the PRISMA protocol to analyze 63 empirical studies from the Scopus database. Their review shows that researchers have studied overconfidence herding and loss aversion biases most frequently in formal market environments which exist in South Asia, while researchers have not studied many other vital biases which include regret

2. REVIEW OF LITERATURE

The field of investment decision-making requires behavioural biases as essential elements for study. The body of research demonstrates how scholars have studied the connection between behavioural biases and multiple factors, including risk perception, financial literacy, and investment performance. The literature review presents the major research contributions which different scholars have made in this research field. Investors use heuristics to make investment decisions because they need an easier method for assessing financial data, asset performance, and market trends. Most investors use recent price trends, recognisable companies, and opening stock prices to make quick decisions without performing detailed research (Ricciardi & Simon, 2000). Heuristics lead people to make systematic mistakes, resulting in cognitive biases, including the anchoring effect, availability heuristics, framing effect, and confirmation bias (Yasseri & Reher, 2019; Lyons & Kass-Hanna, 2021). Divakara Reddy and his team discovered that Indian stock market investors used heuristics as rules of thumb to make investment decisions which resulted in a positive and statistically significant effect ($\beta = 0.372, p < 0.001$). This finding confirms research which shows that investors use mental shortcuts to make investment decisions when they face uncertainty (Waweru et al., 2008). Malik et al. found that PSX retail investors make their investment decisions based on four behavioural biases, including overconfidence, availability, loss aversion, and regret aversion ($\beta = 0.329, p < 0.001$). The research community has identified overconfidence as the most studied bias in behavioural finance (Tekçe et al., 2016). The systematic literature review by Sharma and Negi (2025) shows that loss aversion, overconfidence, mental accounting, representativeness, regret aversion, and herding emerge as the main biases which shape individual investors' decisions. Indonesian investors decided to invest based on overconfidence, the disposition effect, herding behaviour, and risk perception (Purnomo et al., 2025). The disposition effect describes how investors sell their successful investments too soon, while they keep their unsuccessful investments for excessive periods. Purnomo et al. (2025) established that disposition effect influences investment choices and Shunmugasundaram and Sinha (2026) showed that it serves as a mediator between behavioral biases and investment results. Investors show herding behaviour when they choose to follow the investment choices made by more numerous investors which leads to market price changes that produce either bubbles or market crashes (Kellard et al., 2016). Investors in financial markets display this behaviour by following the existing consensus which everyone else accepts when they experience uncertainty, time constraints, and a lack of information. The researchers determined that herding, the disposition effect, blue-chip bias, and overconfidence together influence both risk perception and financial literacy in Saudi equity markets (Almansour et al., 2024). All four behavioural finance factors showed a significant effect on investment decisions because they increased risk perception and financial literacy which served as intermediaries between them. Kathpal et al. (2023) investigated how investor financial literacy relates to heuristic-driven biases (overconfidence, representativeness, availability, and anchoring bias) through risk perception as a mediator.

2.2 Objectives of the Study

The primary objective of this study is to identify and analyze the major behavioral biases that influence investment decision-making across diverse financial markets.

2.3. HYPOTHESES OF THE STUDY-

Based on the literature review, the following hypotheses are proposed:

H1: Behavioural biases significantly affect investment decisions.

H2: Behavioural biases have a significant direct effect on risk perception

3. METHODS

This study adopts a systematic methodological framework to examine the importance of behavioural biases and factors that impact investors' decision-making. The research methodology outlines the procedures used to collect, analyse, and interpret data related to behavioural factors and decision-making of investors in the equity market.

3.1 Research Design: This study adopted a descriptive and analytical research design based on a systematic literature review and meta-synthesis. The descriptive approach explains the concepts of behavioural biases, risk perception, financial literacy, and investment decision-making. The analytical approach examines the relationships between these variables, as reported in multiple empirical studies. This design is suitable for understanding how behavioural biases influence investment decisions in different market contexts.

3.2 Nature of the Study: The research consists of two main parts: theoretical concepts and practical research. This study investigates how factors related to individual behaviour and psychology influence real-life when investors make investment decisions. This study investigates how psychological factors help investors manage their finances better while making investment decisions in the equity market.

3.3 Data Sources: This study is based entirely on secondary and primary data sources. Secondary data were collected from various sources, including academic journals, behavioural finance surveys, books, and reports published by institutions such as the Reserve Bank of India, World Bank, and OECD. The primary sources of data were investors from different occupations and genders.

3.4 Sampling Technique and Sample Size: This study employed snowball sampling to recruit participants. Initially, only a small number of life insurance policyholders were selected for the study based on certain criteria. Later, these participants suggested other people who might be able to help them. This sampling method allows researchers to reach many life insurance policyholders, especially those who might not be easy to reach using standard methods (Adil et al., 2021; Almansour, 2020; Yoshida et al., 2013). This study considered 180 respondents, comprising individual investors such as household and employees.

3.5 Data Collection Tools: A systematic questionnaire was used to obtain primary data on borrowers' levels of financial literacy. The survey had several parts that asked about demographics, behavioural factors, and how people make investment decisions.

4. RESULTS AND DISCUSSION

The data collected from 180 respondents were analysed using descriptive statistics, including the mean and standard deviation, to understand the investor behaviour patterns influenced by behavioural biases.

Table 1: Descriptive Statistics of Behavioral Bias Indicators

Statement	Mean	Std. Deviation	Interpretation
Use past investment experience	4.02	0.944	High reliance on experience (Heuristic bias)
Follow other investors (Herding)	3.95	0.934	Moderate herding tendency
Hold loss-making stocks	4.00	1.014	Presence of disposition effect
Prefer broker/advisor advice	4.07	0.902	Strong dependence on external advice
Trust one's own decisions over market	4.02	0.943	Overconfidence bias
Focus on supporting information	4.03	0.898	Confirmation bias
Check past price trends	4.10	0.889	Strong heuristic behavior

The mean values (ranging from 3.95 to 4.10) indicate that behavioural biases are significantly prevalent among investors, with heuristic-driven decisions being the most common.

5. DISCUSSION

This study examined how investors made their investment decisions through different market scenarios, which were determined by their behavioural biases, ability to understand risks, knowledge of financial matters, and investment experience. The results show that investors depend on behavioural biases which affect their decision-making process under all market conditions.

The study results demonstrated that psychological and behavioural biases lead to changes in investor decisions which were evident among all participants, according to existing research in behavioural finance. Researchers have identified behavioural and psychological factors as the primary reasons for investors' shift from rational decision-making to irrational behaviour (Mittal, 2022; Shefrin, 2024; Zahera & Bansal, 2018). Divakara Reddy and his colleagues found that investment decisions received positive effects from heuristics, which reached statistical significance through a coefficient value of 0.372 and a significance threshold of p-value less than 0.001. The authors demonstrate that current conditions in finance help investors understand financial information better which results in their ability to analyse data more effectively and use advanced financial information to analyse Indian markets.

Malik and his team studied PSX retail investors who showed that four behavioral biases which included overconfidence and availability and loss aversion and regret aversion serve as the main behavioral factors which drive their investment decisions. The physical features of the PSX reveal the strength of this connection, as retail investors establish mainstream trading and are unable to obtain professional consultancy facilities.

Shunmugasundaram and Sinha found that behavioural biases significantly and positively impact investment decisions. The study found that overconfidence leads to a coefficient value of 0.412, a t-value of 8.982, and a p-value of less than 0.01 which shows that it has a major impact on investment decisions. The study showed that overconfidence ($\beta = 0.412$, $t = 8.982$, $p < 0.01$) and disposition effects ($\beta = 0.263$, $t = 5.971$, $p < 0.01$) serve as major factors which determine how people make investment choices.

5. CONCLUSION

This study highlights the significant role of behavioural biases in influencing investment decision-making among investors. The findings clearly indicate that investors do not act purely rationally; instead, their decisions are shaped by psychological and cognitive factors.

Among all biases, **heuristics emerged as the most influential**, indicating that investors heavily depend on past experience and simplified decision-making rules. Additionally, **overconfidence, confirmation bias, and the disposition effect** were found to strongly affect investment behaviour.

Interestingly, **herding behaviour showed a relatively lower influence**, suggesting that while investors consider others' actions, they still rely more on personal judgment and experience.

The study concludes that

- Behavioural biases are deeply embedded in the decision-making process of investors.
- Financial literacy and awareness can partially mitigate these biases but cannot eliminate them.
- Understanding these biases is essential for improving investment strategies and financial results.

6. FUTURE RESEARCH DIRECTIONS

This study opens several avenues for future research.

1. **Inclusion of Advanced Statistical Models:** Future studies can apply regression, SEM, or machine learning techniques to establish causal relationships between variables.
2. **Cross-Country Comparative Analysis:** Comparative studies between emerging and developed markets can provide deeper insights into behavioural differences.
3. **Role of Technology and AI:** Investigate how robo-advisors and AI-based investment platforms influence behavioural biases.
4. **Longitudinal Studies:** Future research should track investor behaviour over time to examine how biases evolve with experience.
5. **Expanded Behavioural Variables:** Additional biases, such as regret aversion, anchoring, and mental accounting, can be explored in greater depth.
6. **Impact of Financial Education Programs:** Studies can evaluate how structured financial literacy programs reduce irrational investment behaviours.

REFERENCES

- Ahmad, M., & Shah, S. Z. A. (2022). Overconfidence heuristic-driven bias in investment decision-making and performance: Mediating effects of risk perception and moderating effects of financial literacy. *Journal of Economic and Administrative Sciences*, 38(1), 60-90.
- Akin, & Akin. (2024). [Cited in Malik et al., 2026]
- Almansour, B. Y., Almansour, A. Y., Elkrggli, S., & Shojaei, S. A. (2024). The Investment Puzzle: Unveiling Behavioural Finance, Risk Perception and Financial Literacy. *Review of Behavioral Economics*, 10(4), 131-151.
- Ashfaq, M., Shafique, A., & Selezneva, V. (2024). Exploring the missing link: Financial literacy and cognitive biases in Investment Decisions. *Journal of Modelling in Management*, 19(3), 871-898.
- Barberis, N., & Thaler, R. (2003). A survey of behavioural finance. *Handbook of the Economics of Finance*, 1, 1053-1128.
- Bhanu, B. K. (2023). Behavioural finance and stock market anomalies: Exploring psychological factors that influence investment decisions. *Commerce and Economic Management*, 23.
- Camilli, R., Cristofaro, M., Hristov, I., & Sargiacomo, M. (2024). Cognitive biases in accounting judgment and decision-making. *Accounting Forum*.
- Divakara Reddy, N., Santosh, B. R., Ananda, S., & Desai, G. (2026). Behavioural Biases and Investment Decision-Making in the Indian Stock Market: The Moderating Role of Financial Literacy and Investor Experience (version 2). *F1000Research*, 14, 1283. <https://doi.org/10.12688/f1000research.171289.2>
- Fama, E. F. (1970). Efficient capital markets: A review of theory and empirical work. *The Journal of Finance*, 25(2), 383-417.
- Herathmenike, H. M. M. A., Dewasiri, N. J., & Munasinghe, A. (2025). Unpacking investor psychology: A systematic review and meta-analysis of behavioural biases shaping investment decisions. *F1000Research*, 14, Article 1146. <https://doi.org/10.12688/f1000research.168166.1>
- Kathpal, S., Akhtar, A., & Zaheer, A. (2023). Financial Literacy and Heuristic-Driven Biases: The Role of Risk Perception. *Review of Behavioral Economics*, 10(4), 335-366.
- Kellard, N. M., Coakley, J., & Tsvetanov, D. (2016). Bubbling over! The behaviour of oil futures along the yield curve. *Journal of Empirical Finance*, 37, 20-36.
- Lo, A. W. (2004). The adaptive markets hypothesis: Market efficiency from an evolutionary perspective. *Journal of Portfolio Management*, 30(5), 15-29.
- Lusardi, A., & Mitchell, O. S. (2014). The economic importance of financial literacy: Theory and evidence. *American Economic Journal: Journal of Economic Literature*, 52(1), 5-44.
- Lyons, A. C., & Kass-Hanna, J. (2021). Behavioural economics and financial decision-making. *Handbook of Personal Finance (in Korean)*. De Gruyter.
- Madaan, G., & Singh, S. (2019). An analysis of behavioural biases in investment decision-making. *International Journal of Financial Research*, 10(4), 55-67.
- Malik, L., Quddus, A., & Watto, W. A., Barakat, H. A., Fahlevi, M., & Aziz, A. L. (2026). Behavioural biases and investment decisions with mediating role of risk perception and moderating role of financial literacy. *Discover Psychology*. <https://doi.org/10.1007/s44202-026-00669-9>
- Malmendier, U., Pouzo, D., & Vanasco, V. (2020). Investor experience and financial market dynamics. *Journal of Financial Economics*, 136(3), 597-622.
- Markowitz, H. (1952). Portfolio selection. *The Journal of Finance*, 7(1), 77-91.
- Mittal S. K. (2022). Behavioural biases and investment decisions: Theoretical and research framework. *Qualitative Research in Financial Markets*, 14(2), 213-228.
- Purnomo, A., Murhadi, W. R., & Wijaya, L. I. (2025). Behavioural bias and risk perception in investment decision-making: The moderating role of financial literacy. **Jurnal Manajemen Maranatha*