

The Role of Behavioural Finance Biases in Investment Decision Making

Dr. Ruby Kazmi

Assistant Professor, Department of Economics, Shia P.G. College, Lucknow

Abstract

Traditional finance theories assert that investors act rationally, carefully evaluating risk and return before making decisions to maximize profit. However, behavioural finance challenges this view by introducing psychological factors that impact decision-making. This research paper aims to investigate how behavioural biases affect investment decisions under conditions of uncertainty. Investment decision-making is complex, influenced by both rational and irrational human behaviours, which are explored through this study. Variables in behavioural finance—such as heuristics, prospect theory, personality traits, emotions, moods, and environmental factors—are examined. Key psychological biases, including overconfidence, representativeness, anchoring, regret aversion, hindsight, herding effect, and home bias, are considered. The research employs a survey questionnaire to gather data, with regression analysis conducted using SPSS software. The results show that behavioural biases significantly affect investment decisions, with heuristic behaviours exerting a stronger influence than prospect theory and personality traits. The study's findings highlight the importance of considering psychological factors in investment decision-making, providing valuable insights for investors and financial institutions.

Keywords: Behavioural Finance, Decision Making, Heuristic, Prospect Theory, Big Five Personality Traits

1. Introduction

Investment decisions have traditionally been modelled as rational processes driven by the careful evaluation of risk and return. However, real-world investor behaviour frequently deviates from rational decision-making due to the influence of psychological and cognitive biases. Behavioural finance addresses this discrepancy by incorporating psychological factors into financial models, exploring how biases such as overconfidence, anchoring, and herding affect investors' choices. The purpose of this paper is to investigate the role of these biases in investment decision-making and assess their impact on market outcomes.



ACCESS



Crossref DOI Prefix 10.46523

The integration of psychological and cognitive concepts into finance has led to the emergence of the field of behavioural finance. This discipline delves into how investors make decisions that are often influenced by irrational biases. Investment decision-making is a complex and challenging process, as it involves psychological, sociological, and cognitive factors. Prior to the 1990s, financial theories often failed to align with real market behaviour. However, during the 1990s, modern finance began to recognize this discrepancy, integrating psychology into finance to form behavioural finance, which acknowledges that market behaviour is often shaped by psychological influences.

While behavioural finance shares some similarities with traditional finance, it challenges traditional theories that focus primarily on rational behaviour and profit maximization, which often overlook individual investor behaviour. Behavioural finance seeks to understand the psychological and sociological factors—such as overconfidence, fear, cognitive biases, and emotions—that affect investment strategies and decision-making processes. Unlike traditional theories, behavioural finance connects investment decision-making with the psychological traits of investors, impacting investment returns and growth.

The aim of this paper is to examine how different personality types exhibit varying behaviours in their investment decisions. It also explores how situational factors can influence financial decisions, as investors may respond differently to market events based on psychological factors. The paper also investigates the global impact of behavioural finance on stock and capital market decision-making. The primary objective is to assess how behavioural finance affects investment decisions by identifying key anomalies within the field that influence these processes.

2. Literature Review

The decision-making process is not solely influenced by situational and environmental factors but is also closely tied to the psychology of the decision-maker. It is a complex mental activity shaped by the psychological behaviours of individuals. Essentially, decision-making involves selecting the best option from a range of alternatives after gathering and evaluating relevant information. In the context of behavioural finance, investor psychology combines financial and psychological factors, examining how these elements influence decision-



making related to stock markets and investments.

Behavioural finance has become an integral part of decision-making, challenging modern finance theories by demonstrating that market anomalies can be better understood by recognizing the psychological patterns in investor behaviour.[2] Finance managers can make more informed decisions by understanding the principles of behavioural finance. Unlike traditional finance, which assumes that investors make rational decisions, behavioural finance acknowledges the role of cognitive and emotional biases in the investment decision-making process.[14]

3. Heuristic Behaviour

In unpredictable and uncertain environments, investors often make decisions using trial and error or by relying on traditional rules of thumb. However, cognitive and emotional factors also influence the evaluation of investment alternatives, which can undermine rational decision-making.

3.1. Representativeness

Investors frequently base decisions on recent investment outcomes. If a previous investment was successful, they tend to replicate the same strategy in future investments without considering changing uncertainties.[10] This behaviour, known as representativeness bias, often leads to overreaction, where investors prefer to buy "hot" stocks based on past performance rather than evaluating the current potential of other stocks.[12]

3.2. Overconfidence

Confidence is generally a positive trait in investing, but overconfidence can be detrimental. Overconfident investors may underestimate risks and overestimate their own knowledge and abilities due to prior success. This can result in increased trading activity and heightened risk exposure, often leading to failures.[17]

3.3. Anchoring

Anchoring occurs when investors rely too heavily on a single piece of information—often past trends—when making decisions. Even when new information becomes available, the



decision-making process is only slightly adjusted because investors are "anchored" to the historical data.[1]

3.4. Gambler's Fallacy

Investors sometimes make decisions based on faulty predictions, believing that past losses will soon be compensated by gains, or vice versa. This speculative behaviour can lead to incorrect investment choices, where money is lost due to misplaced confidence in a reversal of fortunes.[5]

3.5. Availability Bias

Availability bias occurs when investors give undue weight to information that is more readily available or memorable, regardless of its actual importance. Decisions are then made based on the perceived significance of this information, which can result in suboptimal returns or, in some cases, losses.[18]

3.6. Escalation of Commitment

Even when it becomes apparent that an investment decision was incorrect, some investors continue to pour resources into it. This commitment, driven by the desire to avoid acknowledging a mistake, causes investors to ignore negative information and remain overly optimistic about the potential success of their decision.[18]

3.7. Hindsight

Hindsight bias refers to the tendency of individuals to view events as more predictable after they have occurred. Investors may adjust their decisions slightly after an event, believing that they "knew it all along," even though their earlier predictions may not have been accurate. This bias can lead to overconfidence in future decisions.[18]

3.8. Randomness

Investment decisions can be influenced by individuals' beliefs in luck or fate. Superstitious investors may base their decisions on irrational factors, believing that outcomes are predetermined by luck. On the other hand, some investors who have a strong sense of





personal control disregard fate and rely on rational analysis.[21]

3.9. Herding Effect

The herding effect occurs when investors make decisions by following the crowd rather than conducting their own analysis. They rely on publicly available information or the actions of others, leading to collective movements in the market that may not be grounded in sound financial reasoning.[15]

3.10. Disposition Effect

This bias manifests when investors quickly sell stocks that have increased in value while holding onto stocks that are underperforming. This behaviour, driven by a fear of realizing losses, can negatively affect long-term investment returns.[4]

3.11. Home Bias

Home bias refers to the tendency of investors to prefer domestic investments over foreign ones. This bias stems from concerns about the costs, risks, and potential informational disadvantages of investing abroad. Consequently, it limits diversification and can affect the overall performance of an investment portfolio.[11]

Stock prices fluctuate as a result of both rational and irrational behaviour, which can lead investors to make decisions based on optimistic or pessimistic outlooks. By applying psychological heuristics, investors often overreact or underreact to market conditions, illustrating the impact of behavioural finance on decision-making.[20]

H0: Heuristic behaviour has no significant impact on investment decisions.

H1: Heuristic behaviour has a significant impact on investment decisions.

4. Prospect Theory

Prospect theory explains how different mental states contribute to investment decisions, particularly in how individuals perceive risk. Investors often exhibit **loss aversion**, where they are more inclined to take risks to avoid losses but become risk-averse when there is a possibility of gains. This theory highlights how psychological factors can drive risk-seeking





behaviour in the context of potential losses, contrasting with risk aversion when dealing with potential gains.[3]

4.1. Regret Aversion

Regret aversion occurs when investors avoid selling low-performing stocks to evade the emotional pain of regret from making poor investment choices. As a result, investors hold onto these underperforming stocks, hoping to avoid realizing a loss, even though this strategy often leads to diminished returns. In some cases, investors may even justify these decisions by reducing taxes through investment losses, but they ultimately miss out on better opportunities.[19]

4.2. Framing

Framing refers to how the way information is presented influences investors' choices. Investors may favour certain investment options simply because they are framed in a way that resonates with their prior experiences or beliefs. The words used and how the situation is presented can strongly affect which option investors perceive as most appealing, even if it may not be the most rational choice.[13]

4.3. Mental Accounting

Mental accounting is a psychological concept that involves categorizing financial activities into separate accounts based on subjective criteria. Investors manage their investments by mentally compartmentalizing them: one part determines how returns are assessed, another organizes specific activities into different accounts, and a third component regulates the frequency with which options are evaluated. This system of mental accounting plays a key role in shaping investment decisions by helping investors assign value to different options and manage their investment strategies.[16]

4.4. Self-control

Self-control is crucial for investors seeking to avoid losses and make rational investment decisions. Investors develop self-discipline to protect themselves from over-consumption by setting clear boundaries between capital investment and funds for immediate spending. This





separation allows investors to better manage their resources, focus on long-term growth, and avoid impulsive actions that could jeopardize their financial stability.[22]

Every individual has a unique approach to decision-making, which is influenced by their personal experiences and knowledge. Investors create strategies based on self-awareness and adapt to market conditions according to their own observations. Understanding psychological biases is critical to shaping investment strategies, as these biases can lead to fluctuating investment criteria that impact the decision-making process. Furthermore, feelings and emotions, as well as psychological influences, are closely tied to risk and return assessments, ultimately guiding investors' decisions.[7]

H0: Prospect behaviour has no significant impact on investment decisions.

H2: Prospect behaviour has a significant impact on investment decisions.

5. Role of Personality

In addition to psychological biases, personality traits also play a significant role in influencing investment decisions. Different personality characteristics lead decision-makers to react differently when faced with similar situations or challenges.[9] While rationality—guided by estimation, knowledge, and experience—plays a dominant role in shaping decisions, personality traits add another dimension to the decision-making process.

5.1. Extroversion

Extroverted investors tend to base their decisions on external influences such as information from outside sources and opportunities presented to them. They often ignore their own internal evaluations, relying more on external judgment. Extroverts are typically more focused on the present and less inclined to follow strict rules and regulations. Their lower internal control, weaker intellectual rigor, and a tendency toward impulsive behaviour can significantly affect their investment choices.[20]

5.2. Agreeableness

Individuals with high agreeableness are influenced by the opinions and needs of others when making decisions, especially in emotionally charged situations. Their decisions are often





motivated by a desire to help others and maintain harmonious relationships. In investment decisions, particularly in partnership settings, these individuals prioritize sincerity and honesty, which can sometimes lead them to make less financially driven choices.[20]

5.3. Conscientiousness

Conscientious investors are characterized by trustworthiness, self-discipline, and a high level of motivation. Their decision-making is generally more rational, as they tend to carefully assess risks and adjust their strategies to maximize profits. Conscientious individuals are also more likely to manage their investments methodically, ensuring their actions align with long-term financial goals.[20]

5.4. Neuroticism

Investors with high neuroticism focus primarily on achieving personal goals and maximizing their own benefits. Their decisions are often driven by self-interest and lack regard for social values or external factors. Neurotic individuals may display erratic decision-making behaviour, prioritizing short-term gains over broader, more stable investment strategies.[20]

5.5. Openness to Experience

Those with a high degree of openness to experience are more inclined to take risks, often drawn to innovative or unconventional investment opportunities. These investors seek new experiences and knowledge, frequently engaging in social, political, cultural, and financial market activities. Their openness leads them to explore high-risk, high-reward opportunities, making them more likely to invest in new or experimental projects.[20]

H0: Personality characteristics have no significant impact on investment decisions.

H3: Personality characteristics have a significant impact on investment decisions.

6. Feelings and Emotions

Recent studies highlight the significant role that feelings and emotions play in shaping investment decisions. Moods, which are deeply intertwined with feelings, can influence decision-making, often triggered by environmental factors such as climate, biological





rhythms, and societal events. These ecological variables can directly affect stock prices, leading to deviations in investor behaviour based on changes in the environment.[8]

Investor emotions are closely tied to their perceptions of stock performance. For instance, certain events can provoke emotional responses that influence how investors assess risks and make decisions. Behavioural finance researchers have noted that emotions often correlate with risk-taking behaviour, with feelings guiding investors in determining whether a project is risky or likely to yield high returns. The predictable nature of some emotional responses allows for a cognitive approach to assessing risk and uncertainty in the market.

For example, feelings of **loss aversion**—the fear of realizing a loss—can heavily influence an investor's decision to hold onto a failing stock, despite negative market indicators. Recognizing these emotional patterns can enable better decision-making, as an awareness of the psychological aspects of feelings and emotions allows investors to anticipate potential outcomes more effectively. In this way, studying emotions can help investors make more informed and rational decisions, ultimately leading to better investment results.[6]

7. Methodology and Results

A quantitative research approach was employed to gather and analyze data for this study. Factors such as resource availability, research expertise, and the time frame of the study influenced the methodology. A survey was conducted using a structured questionnaire designed to capture responses from investors and financial institutions. The questionnaire employed a Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree) to measure participants' perceptions of various behavioral biases and their impact on investment decisions.

Once data collection was completed, regression analysis was performed using SPSS software to interpret the empirical findings.

Data Normality and Reliability: The skewness values (.760, -.238, -.017) and kurtosis values (.095, -.669, -.371) for heuristic behaviour, prospect theory, and personality characteristics respectively indicate that the data followed a normal distribution, as the values fell within the acceptable range of +3 to -3. The overall reliability of the data, based on both



independent and dependent variables, was measured at 0.540, indicating a moderate level of reliability.

The correlation table illustrates the relationships between the independent variables (heuristic behaviour, prospects theory, personality characteristics) and investment decision-making. The significance (Sig. (2-tailed)) values for the correlations with investment decision are as follows:

Correlations	Heuristic Behavior	Prospects Theory	Personality Characteristics	Investment Decision
Heuristic Behavior	1	.074	-.043	.643**
Sig. (2-tailed)		.306	.549	.000
N	195	195	195	195
Prospects Theory	.074	1	-.056	.140
Sig. (2-tailed)	.306		.433	.050
N	195	195	195	195
Personality Characteristics	-.043	-.056	1	.197**
Sig. (2-tailed)	.549	.433		.006
N	195	195	195	195
Investment Decision	.643**	.140	.197**	1
Sig. (2-tailed)	.000	.050	.006	
N	195	195	195	195

Note: Correlation is significant at the 0.01 level (2-tailed).

Heuristic Behaviour: $p = 0.000$

Prospects Theory: $p = 0.050$

Personality Characteristics: $p = 0.006$

All these p-values are less than 0.05, indicating a statistically significant relationship. This suggests that there is a strong connection between behavioural finance factors and investment decision-making. The negative and positive correlations highlight how various behavioural aspects influence the decisions investors make in the financial market.

Table 2. Relationship Between Model and Dependent Variable

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.689	.475	.467	.66684

Predictors: (Constant), Personality Characteristics, Heuristic Behavior, Prospect Theory.

The model summary table presents the relationship between the model and the dependent variable, highlighting the overall impact of the independent variables on the dependent variable. The R-Square value of 0.475 indicates that 47% of the variation in the dependent variable can be attributed to the independent variables.

Table 3. Impact of Independent Variables on the Dependent Variable.

ANOVA Summary

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	76.940	3	25.647	57.675	.000b
Residual	84.933	191	.445		
Total	161.873	194			

- **Dependent Variable:** Investment Decision.
- **Predictors:** (Constant), Personality Characteristics, Heuristic Behavior, Prospect Theory.

The ANOVA results indicate the model's fitness, with an F-value of $(F(3, 191) = 57.675)$ and a significance level of $(p < 0.05)$. This suggests that the null hypothesis can be rejected. Additionally, the p-value of .000 demonstrates a strong impact of the independent variables on the dependent variable.

Table 4. Impact of Heuristic, Prospect Theory, and Personality Characteristics on the Dependent Variable

Model	Unstandardized Coefficients	Standardized Coefficients	t	Sig.
	B	Std. Error	Beta	
Constant	-0.436	0.250	-1.744	0.083
Heuristic Behavior	0.636	0.052	0.645	12.269
Prospect Theory	0.583	0.290	0.106	2.009
Personality Characteristics	2.153	0.490	0.231	4.394

Note:**Dependent Variable:** Investment Decision.

The coefficient table presents the impact of each independent variable on the investment decision individually. The coefficient value for heuristic behaviour ($B = 0.645$, $p < 0.05$) indicates that it accounts for 64% of the variance in investment decisions, demonstrating a significant relationship. As a result, the null hypothesis is rejected, and the alternative hypothesis is accepted: "There is a significant impact of heuristic behaviour on investment decision." The corresponding regression equation is:

$$[Y = -0.436 + 0.645X]$$

For prospect theory, the coefficient value ($B = 0.106$, $p < 0.05$) shows that it influences 10% of the investment decision, with a significant relationship. Thus, the null hypothesis is rejected, and the alternative hypothesis is accepted: "There is a significant impact of prospect theory on investment decision." The regression equation for this variable is:

$$[Y = -0.436 + 0.106X]$$

Finally, the coefficient value for personality characteristics ($B = 0.231$, $p < 0.05$) indicates that it influences 23% of the investment decision, and the relationship is significant. Consequently, the null hypothesis is rejected, and the alternative hypothesis is accepted: "There is a significant impact of personality characteristics on investment decision." The corresponding regression equation is: $[Y = -0.436 + 0.231X]$





8. Discussion

The study's results indicate that heuristic behaviour has a more substantial influence on investment decisions than prospect theory and personality characteristics. All sub-variables examined support the acceptance of the alternative hypotheses. When comparing these findings with other research, variables such as representativeness, overconfidence, anchoring, and the gambler's fallacy have been reported with significance (p) values of 0.58, 0.91, 0.00, and 0.00, respectively. This study integrates these variables into the framework of heuristics, with a significant value of 0.000 for heuristic behaviour, confirming the acceptance of the alternative hypothesis.

Furthermore, other studies suggest that prospect theory is particularly effective in decision-making. In this research, 70% of respondents exhibited loss aversion, and 61% demonstrated regret aversion. The findings also indicate a positive effect of prospect theory on investment decisions, leading to the acceptance of the second alternative hypothesis with a significance value of 0.046.

Additionally, research investigating personality characteristics reveals correlations with decision-making behaviours. For example, extroversion and hindsight are significantly correlated with a p-value of 0.02, while agreeableness and randomness show significance at 0.003. Neuroticism and openness also have significance levels of 0.000 and 0.10, respectively. Cumulatively analyzing these personality traits suggests that they can indeed impact decision-making, leading to the acceptance of the third alternative hypothesis with a significance level of 0.000.

Overall, this discussion highlights the critical role that heuristics, prospect theory, and personality characteristics play in shaping investment decisions, underlining the complexity of human behaviour in financial contexts.

9. Conclusion

This study reveals the diverse behaviours of decision-makers within the framework of behavioural finance, focusing specifically on heuristic and prospect behaviours. The first hypothesis (H1) pertains to heuristic behaviour in investment decision-making. To test this



hypothesis, sub-variables such as representativeness, overconfidence, anchoring, and the gambler's fallacy were empirically analyzed. Additionally, other sub-variables, including randomness, hindsight, escalation of commitment, and availability bias, were examined descriptively through logical reasoning. The empirical and descriptive results support the acceptance of H1.

The second hypothesis (H2) relates to prospect behaviour and its impact on investment decisions. To test this hypothesis, sub-variables such as loss aversion and regret aversion were empirically assessed, while mental accounting and self-confidence were evaluated descriptively. The findings indicate that H2 is accepted, affirming the significant influence of prospect theory on investment behaviour.

Personality characteristics also play a crucial role in investment decision-making, as different personality types lead to varied decision-making processes. The third hypothesis (H3) focuses on personality traits and their relationship with investment decisions. Personality characteristics—including extroversion, agreeableness, openness to experience, neuroticism, and conscientiousness—were empirically tested through regression analysis, leading to the acceptance of H3.

Moreover, the study highlights additional factors influencing investment decisions, such as feelings, moods, and ecological variables. These elements are integrated into the decision-making process and have been discussed from various authors' perspectives, emphasizing their significance.

Overall, the descriptive and empirical tests for hypotheses H1, H2, and H3 indicate positive outcomes, confirming that behavioural finance significantly impacts investment decision-making. This research concludes that behavioural finance plays a vital role in shaping investment choices.

References

- 1) Acar, M. K. (2009). Behavioral finance and the study of the irrational financial choices of credit card users. *Annales Universitatis Apulensis Series Oeconomica*.
- 2) Akkaya, C. U. (2013). The mental and behavioral mistakes investors make.

International Journal of Business and Management Studies, 5(1).

- 3) Konstantinidis, A., & Ak. (2012). From efficient market hypothesis to behavioral finance: Can behavioral finance be the new dominant model for investing? *Scientific Bulletin – Economic Sciences*, 11(2)
- 4) Anwar, A. H. (2016). Impact of behavioral biases on investment decision; Moderating role of financial literacy. *SSRN*.
- 5) Bhattacharya, R. (2012). Behavioral finance: An insight into the psychological and sociological biases affecting financial decision of investors. *ZENITH International Journal of Business Economics & Management Research*, 2(7).
- 6) Lucey, B. M., & Dowling, M. (2005). The role of feelings in investor. *Journal of Economic Surveys*, 19(2), 211-237.
- 7) Kahneman, D., & Tversky, A. (1998). Aspects of investor psychology. *Journal of Portfolio Management*, 24(4), 52-65.
- 8) Dar, M. A. (2019). A conceptual framework on emotions and investment decisions. *National Monthly Refereed Journal of Research in Commerce & Management*, 1(12).
- 9) Shanmugasundaram, V. (2011). Impact of lifestyle characteristics in investment decisions. *International Research Conference and Colloquium*.
- 10) Ghayekhloo, S. R. (2011). Consequences of human behaviors in economics: The effects of behavioral factors in investment decision-making at Tehran Stock Exchange. *International Conference on Business and Economics*.
- 11) Goyal, S. K. (2015). Behavioral biases in investment decision-making: A systematic literature review. *Qualitative Research in Financial Markets*, 7(1), 88-108.
- 12) Goyal, S. K. (2015). Behavioral biases in investment decision-making: A systematic literature review. *Qualitative Research in Financial Markets*, 7(1), 88-108.
- 13) Budhiraja, K., & Tiwari, D. (2018). Impact of behavioral finance in investment decision-making. *International Journal of Civil Engineering and Technology (IJCIET)*, 9(6), 1061-1068.
- 14) Kannadhasan, M. (2006). Role of behavioral finance in investment decisions.
- 15) Kumari, A. K. (2017). A study on impact of behavioral finance in investment decisions of small investors. *International Journal of Management Research and Business Strategy*.





- 16) Johnsson, M., & Lindblom, H. (2002). Behavioral finance and the change of investor behavior during and after the speculation bubble at the end of 1990s.
- 17) Mwangi, G. G. (2011). Behavioral factors influencing investment decisions in the Kenyan property market.
- 18) Dargham, N. A. S., & Daloul, C. (2008). The implications of behavioral finance.
- 19) Qureshi, S. A. (2012). Measuring validity of the determinants of investment decisionmaking.
- 20) Sadi, R., & Gheisari, H. (2011). Behavioral finance: The explanation of investors' personality and perceptual biases effects on financial decisions. *International Journal of Economics and Finance*, 3(5).
- 21) Singh, S. (2012). Investor irrationality and self-defeating behavior: Insights from behavioral finance. *The Journal of Global Business Management*, 8(1).
- 22) Zellweger, T.M., Frey, U., & Halter, F. (2006). A behavioral perspective to financing decisions in family and nonfamily firms by.

