



ISSN: 2617-6548

URL: [www.ijirss.com](http://www.ijirss.com)



## Decoding behavioral biases: Exploring the mediating role of risk perception in shaping investment decisions

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### Abstract

This study investigates the direct and indirect relationships among behavioral biases and individual investors' decision criteria, focusing on the mediating role of risk perception. Employing structural equation modeling, data were collected from 438 respondents actively investing in Indian stock markets using a convenience sampling technique. The outcomes reveal that risk perception is a mediating factor involving blue-chip stocks and investment decisions, indicating a reduction in the risk nature of securities in the decision-making process. Conversely, no mediating effect of risk perception was found among herding behavior bias, the disposition effect, and investment decisions. The study also establishes a significant direct relationship between the disposition effect and risk perception. The results highlight that risk remains a critical factor discouraging investment decisions, whereas blue-chip securities serve as an essential mechanism for mitigating this risk. While prior research has extensively explored biases in behavior and their effects on investment decisions, this study uniquely enhances understanding of the mediating role of risk perception. These findings offer valuable implications for regulatory bodies and policymakers seeking to improve investors' decision-making frameworks in evolving markets.

**Keywords:** Behavioral biases, Emerging markets, Investment decision-making, Prospect theory, Risk perception.

**DOI:** 10.53894/ijirss.v8i4.8219

**Funding:** This study received no specific financial support.

**History:** Received: 2 May 2025 / Revised: 9 June 2025 / Accepted: 11 June 2025 / Published: 1 July 2025

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**Competing Interests:** The authors declare that they have no competing interests.

**Authors' Contributions:** All authors contributed equally to the conception and design of the study. All authors have read and agreed to the published version of the manuscript.

**Transparency:** The authors confirm that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

**Publisher:** Innovative Research Publishing

## **1. Introduction**

Behavioral finance explains the relationship between various psychological and intellectual factors, along with emotional and social factors, regarding how behavior influences investment decision-making and drives stock market dynamics. Individual investors encounter challenges in investment decision-making due to cognitive limitations and behavioral biases. Given these complexities, advice from financial experts is necessary to navigate such challenges. The advancements in the use of AI in financial services are considered transformative tools, enhancing precision, effectiveness, and access to meet the evolving requirements of individual investors. It can be stated that investors are not always rational or consistent in their decision-making; personal emotions and behavioral biases influence their investment choices. Such irrational behavior, guided by perceptions and judgments of individual investors, leads to biases that disrupt expected market outcomes.

The vibrant existence of risk perception among individual investors affects their investment behavior. The risk perception may increase the frequency of transactions while discouraging investing in stock markets [1]. This implies that individual investors' willingness to invest in stock markets is adversely affected. Investment goals and investor behavior vary from person to person, underlining that individual motivations can influence others.

Extensive literature review has been conducted to examine effect of behavioral biases on individual investors decision-making criteria [2-4]. Considering the importance of biases study, current research aims to (1) understand the influence of behavioral biases of individual investors in India, (2) identify how preconceptions are impacting individual investors' decision-making processes, and (3) analyze the role of risk perception as a mediator in the relationship between behavioral biases and individual investors' decision-making.

In the Indian context, capital market investors' behavior is often understood by limited understanding of decision-making criteria. Influences from social strata and peer recommendations often overshadow available private information, further creating challenges in investment decision-making. The current study considers the unique case of India, where cultural factors also influence behavioral biases, along with risk perception, and investment decision-making when compared with other countries. Few studies on the above variables have been conducted in India, but the combination of behavioral biases, perception of risk, and investment decisions are not extensively explored. Gaining insights into these interactions is essential for understanding the strengths and weaknesses of these variables, which helps in exploring the importance investors assign to these variables in the decision-making process.

Limited studies address the issues mentioned above in developing countries, particularly in India. This emphasizes the importance of this research, which aims to identify behavioral biases affecting individual investors' decision-making in the Indian context and the mediating role of risk perception. The current study addresses a significant research gap by exploring this phenomenon within an Indian context. The insights gained from the study are valuable for investors, empowering them to incorporate behavioral variables into their decision-making processes, thereby enhancing and improving their investment outcomes.

This study involves a comprehensive review of literature, detailed research methodology outlining data sources and testing hypotheses, and empirical analysis of the data collected. The study concludes with a discussion of results, implications, and limitations, providing a thorough understanding of the relationship between behavioral biases, perception of risk, and individual investors' investment decisions.

## **2. Literature Review**

### **2.1. Prospect Theory**

Prospect theory explains the risk mitigation strategies of individual investors who hold loss-making securities while selling profitable or winning securities to realize gains in the stock market [5]. This kind of behavioral bias is identified as the disposition effect, which explores the possibilities of risk avoidance associated with market price volatilities [6]. Disposition bias combines concepts of mental accounting, regret aversion, and information management. Individual investors should focus on reducing losses and enhancing gains, which, in contradiction, directs investors to hold underperforming securities and liquidate profit-making securities. On the other side, herding bias identifies a process of disregarding personal understanding and stock market data but aligns investment decisions with those of other stock market participants. Lee et al. [7] indicate in their studies that such behavioral biases form emotional factors that can overshadow stock price evaluation in a rational manner and privately available information, which are deep-rooted in behavioral finance theories.[8].

#### **2.1.1. Disposition Effect and Risk Perception**

The disposition bias rationalizes individual investors' inclination not to sell loss-making securities while prematurely selling profit-making securities. The study by Statman [9], Barberis and Thaler [10] and Kahneman and Tversky [11] discovered several factors contributing to disposition bias. On the other hand, prospect theory assesses investors' risk tendencies, showing a strong desire to escape from uncertainty and achieve expected profits [12]. The current trend is explained as a risk perception, illustrating why investors tend to resist realizing losses and prefer early locking of gains in the stock market [13].

#### **2.1.2. Herding Behavior and Risk Perception**

Herding bias occurs when individual investors in stock markets imitate the strategies of other investors, driven by overconfidence and risk perception, Banerjee [14]. Shah et al. [15] states that herding behavior amongst investors is dominantly influenced by observed relationship between return and risk. The study conducted by Huang et al. [16] and

Bekiros et al. [17] demonstrates that herding behavior has existed among institutional investors and persists when market uncertainty prevails. Therefore, herding behavior, or understanding and following the herd's behavior, affects the perception of risk and, in turn, influences the decision-making of individual investors.

### *2.1.3. Blue Chip Stocks and Risk Perception*

Blue-chip securities determine benchmarks in the stock market of any economy, representing companies with substantial capitalization and possessing a very strong reputation among investors [18]. The different blue-chip stocks are viewed as strategic investment options because of perceived consistency in returns and the potential of mitigating risk [19]. Research by Bailey and Ball [20] and Amihud et al. [21] states that risk-averse individual investors choose blue-chip securities to reduce exposure to market volatility.

### *2.2. Investment Decision Making*

Individual investors' decision-making process involves many complexities in making informed choices, as it encompasses multiple possibilities for reaching personal goals and understanding market conditions. There are three stages in the decision-making process: perception, cognition, and response. The first stage involves identifying opportunities or threats in the market environment; in the second stage, individual investors analyze available information; and in the final stage, investors execute decisions based on the analysis being carried out [22]. Apart from the above three stages, individual investors' decision-making is also influenced by personal needs, demands, and obligations, which shape their investment preferences and risk tolerance levels. Behavioral biases, stock market dynamics, and financial literacy play vital roles in modeling investment decisions. Much research has emphasized and enhanced understanding of the multiple influences that enable individual investors to make rational decisions [10, 11].

### *2.3. Risk Perception and Investment Decision Making*

The risk-return relationship is a fundamental characteristic of any investment decision; higher risks are often associated with higher returns [23]. The research by Noussair et al. [24] identifies a positive relationship (correlation) among risk factors and investment decision-making. Dominic and Gupta [25] examine the relationship between risk aversion and its influence on investment decision-making. Observe significant effects, highlighting the importance of mental accounting bias in the behavior of individual investors during decision-making.

#### *2.3.1. Disposition Effect and Investment Decision Making*

Individual investors hesitate to realize losses in investments, while having a greater willingness to secure gains or profits, which results in the disposition effect. Pelster and Hofmann [26] prove in their study that disposition bias prompts individual investors to hold loss-making or underperforming securities while selling off outperforming securities. Research by Summers and Duxbury [27] and Chong [28] shows that the disposition effect affects well-performing IPOs due to investors' decisions. Individual investors' loss aversion behavior leads them to sell securities with better returns at a given level of risk, highlighting how aversions can create potential losses [29].

#### *2.3.2. Herding behavior and investment decision making*

Herding behavioral bias is recorded with individual investors who do not possess a clear path and direction, face difficulty in aligning their decisions with market strategies [30]. Herding behavior prevails when uncertainty and fear of losing money grip the minds of investors, and mimics other investors who are perceived to have more relevant information. Baddeley et al. [31] and Philippas et al. [32] share that the existence of this bias significantly influences individual investors' financial decisions, leading to volatile market fluctuations.

#### *2.3.3. Blue chip stocks and investment decision making*

Investments in blue-chip stocks are envisioned to increase individual investors' decision-making confidence because of their stability in prices, consistency in operations, and potential to create value [33]. These stocks are particularly attractive to risk-averse investors who prioritize minimizing potential losses. By offering consistent performance, blue-chip stocks play an important role in designing investment strategies and decisions.

### *2.4. Hypotheses Development*

*H<sup>1</sup>: Disposition effect significantly influences investors' risk perception*

*H<sup>2</sup>: Herding bias significantly influences investors' risk perception*

*H<sup>3</sup>: Investors' risk perception of blue-chip securities is significantly lower*

*H<sup>4</sup>: Risk perception significantly influences investors' investment decision-making process*

*H<sup>5</sup>: Disposition effect significantly influences investors' investment decision-making process*

*H<sup>6</sup>: Herding bias significantly influences investors' investment decision-making process*

*H<sup>7</sup>: Blue-chip stocks significantly influence investors' investment decision-making process*

## **3. Research Methodology**

### *3.1. Population*

The set of all units on which the findings of the research are to be applied is regarded as the population; it identifies the group of people from whom the data are to be collected Hair et al. [34]. Fama [35] suggests that researchers give more

weight to recent patterns and less importance to the population that generates data. In the current study, the population comprises investors in the stock markets of India. It aims to measure the level of investment behavior within the population and evaluate behavioral biases in equity investments. The target population for this study is limited to Indian stock exchanges (Bombay Stock Exchange and National Stock Exchange).

### 3.2. Sampling Size Technique

550 structured questionnaires were dispersed among individual Indian investors, 438 completed and filled-in all forms' questionnaires were considered for analyzing the data, which is above the standards referred by Martinez-Lopez et al. [36] i.e., 384 when the population of the study is unknown and yields reliable outcomes at a confidence level of 95%. Convenience sampling methods have been considered for collecting responses and have helped discover the topic of interest of respondents [37]. Convenience sampling meets current study aims and objectives and improves the trustworthiness of gathered data and results [38]. It shall also result in enhancing the credibility, confirmability, dependability, and transferability of research outcomes. Theoretically, convenience sampling draws samples from a population with minimum variance [39]. Hence, the convenience sampling method was used to gather the required information from individual investors in the stock markets of India, in investigating the role of risk perception in investment behavior and behavioral biases.

### 3.3. Data collection procedure and sources

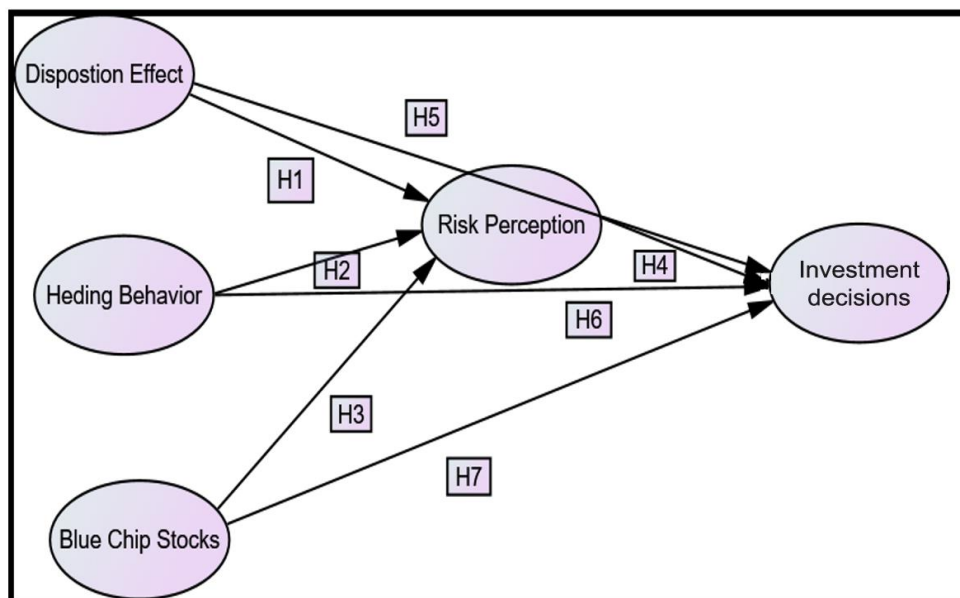
The current study considers primary data for testing hypotheses and objectives taken in the study, wherein primary data refers to data collected for the first time for a particular purpose. The responses of the study are similar to the behavioral characteristics of individual investors in decision-making for investments [40]. Individuals exploring financial opportunities in the stock markets of India are considered respondents for the study. Assistance from stockbrokers who deal directly with investors was obtained to gather responses, and an online form was shared among investors to collect their responses.

### 3.4. Measurement of variables

The structured questionnaire consisted of twenty-seven questions designed to measure biases related to behavioral characteristics, including the disposition effect, herding bias, and blue-chip stocks, with decision-making criteria for investments and a mediating role of risk perception. The questionnaire was divided into two parts: Section A covered respondents' demographics, providing information such as gender, age, marital status, education, and experience. Section B included questions on behavioral biases, individual investors' investment decision-making, and risk perception, with five-dimensional responses ranging from (1) being strongly disagree to (5) being strongly agree, as established in existing studies [40, 41].

### 3.5. Statistical techniques for data analysis

The current study is a cross-sectional, questionnaire-based study; the quantitative technique is used to measure the causal connection between identified variables. Saunders et al. [42] state that questionnaires are used to conduct surveys with the intention of collecting responses for the related study. Basic data collected was tabulated, refined, and recorded in SPSS. Once normality was obtained, the data set was used for creating structural equation modeling (SEM) using AMOS to check the conceptual framework as given in Figure 1. The covariance-based SEM was used as recommended by Martinez-Lopez et al. [36] and Shook et al. [43].

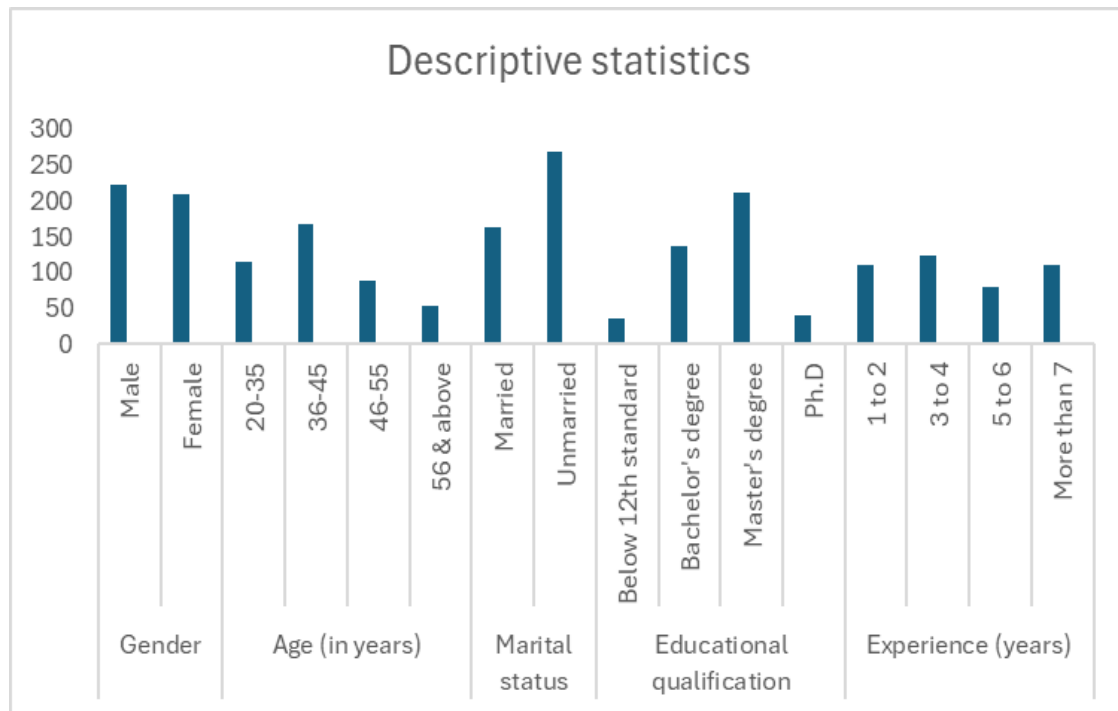


**Figure 1.**  
Conceptual framework.

## 4. Empirical Results and Discussions

### 4.1. Descriptive Statistics

From 438 responses, 226 were males, and 212 were females, constituting 52% and 48%, respectively. In total, it was found that 39% of respondents belonged to the 36-45 years age group, 27% were from the 20-35 years age group, 21% were from the 46-55 years age group, and those above 55 years, which constituted only 57 respondents. Regarding educational qualifications, 215 respondents were postgraduates, 140 held graduate degrees, and the remaining 39 respondents had less than a 12th-grade education. The marital status of respondents was 62% unmarried and 38% married, with a difference of 24%. Based on experience, 127 respondents had 3 to 4 years of investing experience, followed by 114 respondents each in the categories of 1 to 2 years and more than 7 years, and 83 respondents had 5 to 6 years of investing experience in total. Figure 2 depicts the detailed demography of respondents.



**Figure 2.**  
Descriptive statistics of demographic variables.

### 4.2. Correlation and Factor Analysis

Karl Pearson's coefficient of correlation measures the direction and strength of the relationship among given variables. The investigation underlying hypothetical relationships is presented in Table 1. The summary indicates that there is a positive correlation between investment decisions and other behavioral biases, including herding bias, disposition effect, and blue-chip stocks. Additionally, when herding bias is considered an independent variable, all other variables within the construct show positive correlations. The disposition effect and blue-chip securities also exhibit positive correlations among the remaining variables. The mediating variable, risk perception, is positively correlated with all other variables.

Five variables, investment decision, herding bias, disposition effect, blue-chip stocks, and risk perception, have been considered in the study, with a maximum of seven constructs and a minimum of three. Cronbach's Alpha and factor loadings are presented in Table 2, where all the values are more than 0.7, indicating that all variables considered are reliable.

To test the validity of constructs, confirmatory factor analysis has been conducted considering the factor loadings of observed variables on the latent variable. As depicted in Table 2, all variables' loading values are above the ceiling of 0.5 [44]. Every variable's composite reliability (CR) and average variance explained (AVE) are also significant and acceptable.

In discriminant validity testing, the square root of the average variance explained should be above the correlation value of the diagonal elements [45, 46]. Outcomes of the analysis are presented in Table 3. It can be observed that the diagonal values of all variables' constructs are greater than the off-diagonal values, indicating that no discriminant validity has been found. In other words, strong discriminant validity has been identified.

**Table 1.**

Correlation matrix.

Variables	Cronbach alpha	Mean	SD	1	2	3	4	5
ID	0.863	3.781	1.115	1.000				
HB	0.941	3.619	0.829	0.414**	1.000			
DP	0.917	3.821	0.973	0.463**	0.213**	1.000		
BC	0.899	3.991	0.996	0.221**	0.184**	0.253**	1.000	
RP	0.816	3.626	0.914	0.318**	0.191**	0.369**	0.339**	1.000

**Table 2.**

Summary of the structural equation model.

Constructs	Items	Factor Loading	Cronbach alpha	Alpha	CR	AVE
Investment decision	ID1	0.619	0.869	0.863	0.718	0.598
	ID2	0.793	0.907			
	ID3	0.842	0.814			
Disposition effect	DE1	0.675	0.872	0.917	0.702	0.604
	DE2	0.689	0.947			
	DE3	0.719	0.917			
	DE4	0.751	0.921			
	DE5	0.679	0.912			
	DE6	0.711	0.931			
Risk perception	RP1	0.698	0.874	0.816	0.691	0.578
	RP2	0.607	0.793			
	RP3	0.704	0.799			
	RP4	0.649	0.829			
	RP5	0.678	0.808			
	RP6	0.719	0.791			
Blue-chip stocks	BC1	0.638	0.917	0.899	0.673	0.615
	BC2	0.174	0.855			
	BC3	0.683	0.889			
	BC4	0.709	0.905			
	BC5	0.663	0.927			
Herding bias	HB1	0.787	0.937	0.941	0.747	0.591
	HB2	0.719	0.952			
	HB3	0.743	0.896			
	HB4	0.695	0.932			
	HB5	0.737	0.944			
	HB6	0.736	0.961			
	HB7	0.696	0.963			

**Table 3.**

Discriminant validity.

Construct	ID	DE	RP	BC	HB
ID	0.775				
DE	0.378	0.769			
RP	0.515	0.519	0.778		
BC	0.373	0.383	0.459	0.758	
HB	0.419	0.418	0.391	0.581	0.781

#### 4.3. Structural Equation Modelling

After verifying the model's fit in accordance with confirmatory factor analysis for observed data, the structural model is subsequently tested to evaluate causal pathways. The model includes five dimensions, with an independent variable being disposition effect, herding bias, blue-chip stocks, along with a dependent variable of investment decision-making and a mediating variable of risk perception within the SEM framework. SEM parameters and their impact on each dimension and respective constructs are reported in Table 4.

Among the structural models, all the factors are significant. According to the results, GFI = 0.953 (recommended value > 0.9, [47]), CFI = 0.947 (recommended value > 0.9, [47]), TLI = 0.972 (recommended value > 0.9, [47]), RMSEA = 0.047 (recommended value > 0.060), IFI = 0.958 (recommended value > 0.9, [47]), Chi-square = (recommended value < 3) was found to be positive and statistically significant. All selected SEM indices satisfy the threshold values, indicating that the model is statistically plausible, and the model demonstrates good reliability and validity of the variables considered in the current study.

**Table 4.**  
Confirmatory factor analysis.

Models	GFI	TLI	CFI	IFI	RMSEA	$\chi^2/df$
Five-factor model	0.953	0.972	0.947	0.958	0.047	2.61
Threshold	$\geq 0.900$	$\geq 0.900$	$\geq 0.900$	$\geq 0.900$	$\leq 0.060$	$\leq 3.000$

#### 4.4. Direct Effect of Risk Perception between Behavioral Biases and Investment Decision

A direct relationship between the construct's variables with a significance level of 5% is presented in Table 5. As per statistical results, disposition effect influences risk perception ( $\beta = 0.193$ ,  $p < 0.01$ ), and H1 is accepted. Herding bias directly influences the risk perception of individual investors with  $\beta = 0.402$ ,  $p < 0.01$ , thereby accepting H2. The third hypothesis states the relationship amongst blue-chip securities bias and risk perception ( $\beta = -0.223$ ,  $p < 0.01$ ), which is also accepted as it falls in the acceptable range. H4 indicates the influence of risk perception and decision making in investments ( $\beta = -0.39$ ,  $p < 0.01$ ); the hypothesis is not accepted. The significance between disposition effect and investment decision-making ( $\beta = 0.711$ ,  $p < 0.01$ ) is accepted (H5). The H6 is not accepted as the respondents opined that herding bias did not affect their investment decision ( $\beta = 0.84$ ,  $p < 0.01$ ). Finally, there was a direct relationship between blue-chip stock bias and investment decision of an individual investor ( $\beta = 0.203$ ,  $p < 0.1$ ), and H7 is accepted. It can be stated from the above analysis that there is a direct relationship between the independent variables, disposition effect and blue-chip stock bias, and the dependent variable, investment decision, recognized by individual investors, except for the association between herding bias and investment decision, which is rejected. All hypotheses of the study are accepted except H4 and H6.

**Table 5.**  
Hypothesis confirmation.

Hypotheses	Path	Regression coefficient	CR	Result
H1	DE→RP	0.193***	3.627	Accepted
H2	HB→RP	0.402***	5.783	Accepted
H3	BC→RP	-0.223	-4.894	Accepted
H4	RP→ID	-0.39	-0.897	Not accepted
H5	DE→ID	0.711***	11.342	Accepted
H6	HB→ID	0.84	1.853	Not accepted
H7	BC→ID	0.203*	3.348	Accepted

Note: \*\*\* 1% level of significance; \* 10% level of significance.

#### 4.5. Indirect Effect Between Risk Perception on Behavioral Biases and Its Decision on Investment

Mediation demonstrates the existence of a causal relationship between independent and dependent variables, and this relationship is justified by other variables [48]. The relationship between variables with the mediating variable is analyzed using the bootstrap method. The indirect relationships of herding bias, disposition effect, and blue-chip stock bias with investment decision-making, with risk perception serving as a mediating variable, are examined and shown in Table 6.

The mediation effect among herding bias, disposition effect, and investment decision was not supported, as lower and upper bound values are zero; the results are similar to [49]. However, mediation has been demonstrated in studies between blue-chip security bias and investment decisions. Parveen et al. [50] opined that overconfident investors shall have lower risk perception and are likely to have a risk-taking attitude, and go for risky investments, and also positive risk perception among investors indicates optimism in their investments.

**Table 6.**  
Hypothesis confirmation – Mediating variable.

Path	Beta coefficient	Lower bound	Upper bound	Result
HB→RP→ID	0.259	-0.09	2.751	Rejected
DE→RP→ID	0.241	-0.01	1.573	Rejected
BC→RP→ID	0.694	2.373	1.649	Accepted

## 5. Conclusion and Recommendations

This study offers an empirical analysis of the mediating role of risk perception in the relationship between behavioral biases, namely, the disposition effect, herding bias, and blue-chip stock bias, and the investment decisions of individual investors. The findings reveal that behavioral biases have a direct and positive influence on investment decisions. Particularly, the investment choices of individual investors are affected by the disposition effect, which engenders a risk-averse attitude in the Indian stock market ecosystem, especially in investment strategies for a shorter period. On the other hand, herding bias has not shown a significant relationship in decision-making in investments within the Indian financial market.

The important outcome of the current study is that individual investors in India are not able to recognize the full risks modeled by behavioral biases in investment decision-making. It is important to note that blue-chip securities reduce risk perception, as these companies' stocks have convincing reputations, comfortable pricing, and a lower chance of losing invested capital. This understanding indicates that individual investors in India have inclinations towards protecting their



capital and seeking stable options. Risk perception among individual investors in India mediates only between blue-chip securities bias and investment decisions, and it does not mediate with the disposition effect or herding bias, showing different mindsets and strategies among individual investors.

The findings of this study provide vital information and insights about investors who are trying to rationalize their decision-making process for increasing profitability. The exploration of the influence of investors' behavioral biases and the mediating role of risk perception suggests that individual investors can opt for strategies that are more rational and enhance the profitability of their investments in securities. These outcomes also create a path for financial advisors and regulators in designing financial strategies and frameworks that assist in effective practices in the investment journey and reduce the negative effects of investors' behavioral biases.

## 6. Implications

The current study emphasizes the essential requirements for investors to identify and manage various behavioral biases, including herding bias, disposition effect, and bias towards blue-chip securities. Recognizing the impacts of these biases is crucial in individual decision-making, as anomalies can result in financial losses. The findings underscore the role of risk perception as a mediator in investment decisions, providing valuable insights for investors aged 18-35 to incorporate behavioral factors into their decision-making processes to achieve favorable outcomes. There is a need for regulators and policymakers to develop mechanisms to measure investor sentiment, reduce market volatility, and promote price stability. Ongoing research into behavioral biases and their mediating effects can support the development of effective regulatory policies. Regulatory authorities may also introduce relevant financial instruments to mitigate risks associated with behavioral biases, thereby fostering a resilient market.

## 7. Directions for Future Study

The current exploration attempted to bridge the research gap identified in existing literature reviews, and the limitations of those studies have opened new avenues for future research. The primary limitation is the focus on variables identified in prospect theory, which narrows the scope of analysis. Future research in this area can strengthen the study's framework by incorporating variables from prospect and heuristic models, thereby enhancing the understanding of individual investors' behavior. Increasing the sample size and including respondents from different geographical regions will provide a more comprehensive perspective for researchers. Additionally, the current study considers risk perception as a mediating variable. Future studies could explore alternative mediating roles such as capital, market anomalies, financial literacy among respondents, and the role of AI in behavioral finance. Investigating these variables and dimensions could generate valuable insights for policymakers and regulators, enabling them to design evidence-based product strategies to improve market stability and develop effective financial policies.

## References

- [1] J. Cho and J. Lee, "An integrated model of risk and risk-reducing strategies," *Journal of Business Research*, vol. 59, no. 1, pp. 112-120, 2006/01/01/ 2006. <https://doi.org/10.1016/j.jbusres.2005.03.006>
- [2] H. K. Baker, S. Kumar, N. Goyal, and V. Gaur, "How financial literacy and demographic variables relate to behavioral biases," *Managerial Finance*, vol. 45, no. 1, pp. 124-146, 2019.
- [3] A. Bhatia, A. Chandani, and J. Chhateja, "Robo advisory and its potential in addressing the behavioral biases of investors—A qualitative study in Indian context," *Journal of Behavioral and Experimental Finance*, vol. 25, p. 100281, 2020.
- [4] R. Jain, P. Jain, and C. Jain, "Behavioral biases in the decision making of individual investors," *IUP Journal of Knowledge Management*, vol. 14, no. 3, pp. 7-27, 2015.
- [5] H. Shefrin, *A behavioral approach to asset pricing*, 2nd ed. Boston, MA: Elsevier, 2008.
- [6] H. Shefrin and M. Statman, "The disposition to sell winners too early and ride losers too long: Theory and evidence," *The Journal of Finance*, vol. 40, no. 3, pp. 777-790, 1985.
- [7] S.-C. Lee, C.-T. Lin, and C.-K. Yang, "The asymmetric behavior and procyclical impact of asset correlations," *Journal of Banking & Finance*, vol. 35, no. 10, pp. 2559-2568, 2011.
- [8] S. Bikhchandani, D. Hirshleifer, and I. Welch, "A theory of fads, fashion, custom, and cultural change as informational cascades," *Journal of political Economy*, vol. 100, no. 5, pp. 992-1026, 1992.
- [9] M. Statman, "Behavioral finance: Past battles and future engagements," *Financial Analysts Journal*, vol. 55, no. 6, pp. 18-27, 1999.
- [10] N. Barberis and R. Thaler, *A survey of behavioral finance*. In G. M. Constantinides, M. Harris, & R. M. Stulz (Eds.), *Handbook of the Economics of Finance*. Amsterdam, Netherlands: Elsevier, 2003, pp. 1053-1128.
- [11] D. Kahneman and A. Tversky, "Prospect theory: An analysis of decision under risk," *Econometrica*, vol. 47, no. 2, pp. 263-291, 1979.
- [12] S. Combrink and C. Lew, "Potential underdog bias, overconfidence and risk propensity in investor decision-making behavior," *Journal of Behavioral Finance*, vol. 21, no. 4, pp. 337-351, 2020.
- [13] D. Genesove and C. Mayer, "Loss aversion and seller behavior: Evidence from the housing market," *The Quarterly Journal of Economics*, vol. 116, no. 4, pp. 1233-1260, 2001.
- [14] A. V. Banerjee, "A simple model of herd behavior," *The quarterly journal of economics*, vol. 107, no. 3, pp. 797-817, 1992.
- [15] S. S. H. Shah, X. Xinping, M. A. Khan, and S. A. Harjan, "Investor and manager overconfidence bias and firm value: Micro-level evidence from the Pakistan equity market," *International Journal of Economics and Financial Issues*, vol. 8, no. 5, p. 190, 2018.
- [16] G. Huang, Y. Sun, Z. Liu, D. Sedra, and K. Q. Weinberger, "Deep networks with stochastic depth," in *Computer Vision—ECCV 2016: 14th European Conference, Amsterdam, The Netherlands, October 11–14, 2016, Proceedings, Part IV 14*, 2016: Springer, pp. 646-661.



- [17] S. Bekiros, M. Jlassi, B. Lucey, K. Naoui, and G. S. Uddin, "Herding behavior, market sentiment and volatility: Will the bubble resume?," *North American Journal of Economics and Finance*, vol. 42, pp. 107–131, 2017. <https://doi.org/10.1016/j.jbusres.2005.03.006>
- [18] J. Annaert, F. Buelens, L. Cuyvers, M. De Ceuster, M. Deloof, and A. De Schepper, "Are blue chip stock market indices good proxies for all-shares market indices? The case of the Brussels Stock Exchange 1833–20051," *Financial History Review*, vol. 18, no. 3, pp. 277–308, 2011.
- [19] B. Çal and M. Lambkin, "Stock exchange brands as an influence on investor behavior," *International Journal of Bank Marketing*, vol. 35, no. 3, pp. 391–410, 2017.
- [20] R. Bailey and S. Ball, "An exploration of the meanings of hotel brand equity," *The Service Industries Journal*, vol. 26, no. 1, pp. 15–38, 2006.
- [21] Y. Amihud, H. Mendelson, and L. H. Pedersen, *Market liquidity: Asset pricing, risk, and crises*. Cambridge, UK: Cambridge University Press, 2012.
- [22] R. F. Ogarca, "An investigation of decision making styles in SMEs from South-West Oltenia Region (Romania)," *Procedia Economics and Finance*, vol. 20, pp. 443–452, 2015.
- [23] S. Yitzhaki and P. J. Lambert, "Is higher variance necessarily bad for investment?," *Review of Quantitative Finance and Accounting*, vol. 43, pp. 855–860, 2014.
- [24] C. N. Noussair, S. T. Trautmann, and G. Van de Kuilen, "Higher order risk attitudes, demographics, and financial decisions," *Review of Economic Studies*, vol. 81, no. 1, pp. 325–355, 2014.
- [25] C. Dominic and A. Gupta, "Psychological factors affecting investors decision making," *Journal of Xi'an University of Architecture and Technology*, vol. 7, no. 6, pp. 169–181, 2020.
- [26] M. Pelster and A. Hofmann, "About the fear of reputational loss: Social trading and the disposition effect," *Journal of Banking & Finance*, vol. 94, pp. 75–88, 2018.
- [27] B. Summers and D. Duxbury, "Decision-dependent emotions and behavioral anomalies," *Organizational Behavior and Human Decision Processes*, vol. 118, no. 2, pp. 226–238, 2012.
- [28] F. Chong, "Disposition effect and flippers in the Bursa Malaysia," *The Journal of Behavioral Finance*, vol. 10, no. 3, pp. 152–157, 2009.
- [29] H. E. Hershfield and L. A. Kramer, "Examining the effect of social distance on financial decision-making [Working paper]," 2017. Retrieved: <https://rady.ucsd.edu/docs/seminars/kramer-paper.pdf>. 2017.
- [30] D. Braha, "Global civil unrest: contagion, self-organization, and prediction," *PloS One*, vol. 7, no. 10, p. e48596, 2012.
- [31] M. Baddeley, C. Burke, W. Schultz, and T. Tobler, "Impacts of personality on herding in financial decision making," Cambridge Working Papers in Economics No. 1006. University of Cambridge, 2010, 2010.
- [32] N. Philippas, F. Economou, V. Babalos, and A. Kostakis, "Herding behavior in REITs: Novel tests and the role of financial crisis," *International Review of Financial Analysis*, vol. 29, pp. 166–174, 2013.
- [33] M. S. U. Rehman *et al.*, "Adsorption of Brilliant Green dye from aqueous solution onto red clay," *Chemical Engineering Journal*, vol. 228, pp. 54–62, 2013. <https://doi.org/10.1016/j.cej.2013.04.094>
- [34] J. F. Hair, R. P. Bush, and D. J. Ortinau, *Marketing research: In a digital information environment*, 4th ed. New York: McGraw-Hill Education, 2010.
- [35] E. F. Fama, "Market efficiency, long-term returns, and behavioral finance," *Journal of financial economics*, vol. 49, no. 3, pp. 283–306, 1998.
- [36] N. Martinez-Lopez, D. Athonvarangkul, P. Mishall, S. Sahu, and R. Singh, "Autophagy proteins regulate ERK phosphorylation," *Nature Communications*, vol. 4, no. 1, p. 2799, 2013. <https://doi.org/10.1038/ncomms3799>
- [37] P. Sedgwick, "Convenience sampling." *BMJ*, vol. 347, pp. f6304, 2013.
- [38] S. Campbell *et al.*, "Purposive sampling: complex or simple? Research case examples," *Journal of Research in Nursing*, vol. 25, no. 8, pp. 652–661, 2020.
- [39] J. M. Guarte and E. B. and Barrios, "Estimation under purposive sampling," *Communications in Statistics - Simulation and Computation*, vol. 35, no. 2, pp. 277–284, 2006. <https://doi.org/10.1080/03610910600591610>
- [40] J. Y. Lin, "New structural economics: A framework for rethinking development," *The World Bank Research Observer*, vol. 26, no. 2, pp. 193–221, 2011.
- [41] B. Liu, "Sentiment analysis and subjectivity," *Handbook of natural language processing*, vol. 2, no. 2010, pp. 627–666, 2010.
- [42] M. N. K. Saunders, P. Lewis, and A. Thornhill, *Research methods for business students*, 5th ed. Harlow, England: Pearson Education, 2008.
- [43] C. L. Shook, D. J. Ketchen Jr, G. T. M. Hult, and K. M. Kacmar, "An assessment of the use of structural equation modeling in strategic management research," *Strategic Management Journal*, vol. 25, no. 4, pp. 397–404, 2004.
- [44] T. R. Hinkin, "A brief tutorial on the development of measures for use in survey questionnaires," *Organizational Research Methods*, vol. 1, no. 1, pp. 104–121, 1998.
- [45] D. W. Barclay, C. A. Higgins, and R. Thompson, "The partial least squares approach to causal modeling: Personal computer adoption and use as illustration," *Technology Studies*, vol. 2, no. 2, pp. 285–309, 1995.
- [46] C. Fornell and D. F. Larcker, "Evaluating structural equation models with unobservable variables and measurement error," *Journal of Marketing Research*, vol. 18, no. 1, pp. 39–50, 1981.
- [47] D. Hooper, J. Coughlan, and M. Mullen, "Evaluating model fit: a synthesis of the structural equation modelling literature," in *7th European Conference on Research Methodology for Business and Management Studies*, 2008, vol. 2008, no. 2: London, United Kingdom, pp. 195–200.
- [48] P. E. Shrout and N. Bolger, "Mediation in experimental and nonexperimental studies: New procedures and recommendations," *Psychological Methods*, vol. 7, no. 4, pp. 422–445, 2002.
- [49] G. W. Cheung and R. S. Lau, "Testing mediation and suppression effects of latent variables: Bootstrapping with structural equation models," *Organizational Research Methods*, vol. 11, no. 2, pp. 296–325, 2008.
- [50] B. Parveen, A. Parveen, R. Parveen, S. Ahmad, M. Ahmad, and M. Iqbal, "Challenges and opportunities for traditional herbal medicine today, with special reference to its status in India," *Ann Phytomed*, vol. 9, no. 2, pp. 97–112, 2020.