

Influence of Investor Behavioural Biases and Psychological Traits on Investment Performance Among Retail Investors

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Abstract

Traditional finance assumes rational investors, yet real-world bubbles, crashes, and irregular trading patterns show that psychological forces meaningfully shape investment outcomes. This study examines how behavioural biases (herding, loss aversion, overconfidence) and psychological traits (confidence, emotional stability, self-discipline, risk-taking ability) influence retail investment performance. A descriptive, quantitative design was used, with primary data from 153 retail investors in India collected via a structured questionnaire (purposive sampling; Cronbach's Alpha = 0.874). Multiple Regression Analysis tested the effect of behavioural biases on performance; Pearson Correlation Analysis tested the relationship between psychological traits and performance.

Behavioural biases jointly explained 38.44% of the variance in investment performance ($R^2 = 0.3844$, $F = 31.02$, $p < 0.001$), with herding ($\beta = 0.163$, $p = 0.010$), loss aversion ($\beta = 0.189$, $p = 0.013$), and overconfidence ($\beta = 0.199$, $p = 0.003$) each significant. Psychological traits showed a significant, moderate positive correlation with performance ($r = 0.342$, $p < 0.001$). Both dimensions emerged as significant, independent determinants of performance, extending behavioural finance theory, prospect theory, and the theory of planned behaviour into the Indian retail context, with practical implications for investors, advisors, and policymakers.

Keywords: Behavioural Finance, Behavioural Biases, Psychological Traits, Overconfidence Bias, Herding Behaviour, Loss Aversion, Retail Investors, Investment Performance

1. Introduction

Twentieth-century financial theory, led by the Efficient Market Hypothesis and Expected Utility Theory, assumed investors are fully rational, processing information objectively to maximise utility. Recurring bubbles, crashes, and pricing anomalies exposed the limits of this assumption, giving rise to Behavioural Finance -a field recognising that investors rely on mental shortcuts, face cognitive limitations, and are shaped by emotion.

Research in this field has moved beyond documenting irrational decisions to examining their consequences for measurable outcomes. Investor performance is shaped by two related but distinct forces: behavioural biases -systematic errors such as overconfidence, herding, and loss aversion -and psychological traits -stable characteristics such as emotional stability, self-discipline, confidence, and risk-taking ability that condition how investors respond to volatility. This study focuses on retail investors, who -unlike institutional managers -operate without algorithmic tools or formal risk-compliance frameworks. Digitised trading has expanded retail participation but also exposed investors directly to their own psychological vulnerabilities, often resulting in over-trading and suboptimal returns. Most existing literature examines biases and traits in relation to decisions or risk perception rather than measurable performance, and Indian retail-market evidence remains limited. This study addresses that gap by examining the influence of three behavioural biases and four psychological traits on the performance of 153 Indian retail investors.

2. Literature Review

A substantial body of research links behavioural biases and psychological traits to investor decision-making. Personality-and-bias studies find extraversion, conscientiousness, and neuroticism associated with overconfidence and herding, moderated by risk attitude, while higher financial literacy consistently reduces reliance on heuristic biases and herd mentality. Overconfidence has been linked to inflated firm valuations in emerging markets through excess demand for risky assets and underestimated risk premiums, and validated scales now distinguish over-precision, over-placement, and overestimation. Gender-based studies find both male and female investors negatively affected by risk-aversion and herding, moderated by financial literacy, while risk-propensity and demographic studies highlight the need for portfolio strategies tailored to individual investor profiles.

Loss aversion and herding are well documented in the Indian context, with evidence that fear-of-missing-out amplifies both biases, and that loss aversion, overconfidence, and anchoring are among the most influential biases in emerging markets -confirmed by meta-analytic evidence across 31 studies. Big Five personality studies show openness and agreeableness improve decision-making efficiency, while extraversion, openness, and conscientiousness raise loss aversion, with investment strategy mediating the personality–performance link. More recent work attributes portfolio returns directly to behavioural factors such as excessive trading and portfolio concentration, and shows risk perception mediating the bias–performance relationship, particularly under market uncertainty. Regional studies (including Bengaluru) confirm overconfidence, herding, anchoring, and loss aversion frequently co-occur, with loss aversion often most influential among younger investors.

2.1 Research Gap

Despite robust evidence linking biases and traits to investment decisions and risk perception, few studies examine their joint, direct effect on measurable investment performance. Most work isolates a single bias or a narrow set of traits, or stops at decision-making rather than performance outcomes, and Indian retail-market evidence remains limited despite rapid growth in retail participation. This study addresses these gaps by jointly evaluating three behavioural biases and four psychological traits against investment performance among Indian retail investors.

3. Theoretical Framework, Objectives and Hypotheses

The study draws on three complementary perspectives. Behavioural Finance Theory (Kahneman & Tversky, 1979; Barber & Odean, 2001) explains systematic deviation from rational decision-making due to cognitive shortcuts and emotion. Prospect Theory (Kahneman & Tversky, 1979) explains why losses are weighted more heavily than equivalent gains, underpinning loss aversion. The Theory of Planned Behaviour (Ajzen, 1991; Fishbein & Ajzen, 1975) explains how stable psychological traits translate into investment behaviour and performance. This report focuses on the two objectives most directly aligned with the study title.

Table 1. Objectives, Theoretical Basis, Variables and Statistical Tests

Objective	Theory	Independent Variable	Statistical Test
Impact of behavioural biases on investment performance	Behavioural Finance Theory; Prospect Theory	Herding, Loss Aversion, Overconfidence Bias	Multiple Regression
Relationship of psychological traits with investment performance	Theory of Planned Behaviour	Confidence, Risk-Taking Ability, Emotional Stability, Self-Discipline	Pearson Correlation

3.1 Hypotheses

Objective 1: Behavioural Biases and Investment Performance

H₀₁: Behavioural biases do not significantly impact retail investors' investment performance.

H₁₁: Behavioural biases significantly impact retail investors' investment performance.

Objective 2: Psychological Traits and Investment Performance

H₀₂: There is no significant relationship between psychological traits and investment performance.

H₁₂: There is a significant relationship between psychological traits and investment performance.

4. Research Methodology

A descriptive, quantitative research design was used. The population comprised retail investors independently trading stocks and securities -a group especially susceptible to behavioural and psychological influences without institutional safeguards. Respondents were drawn from online investment communities, social media groups, and investor networks in India using non-probability purposive sampling, yielding 153 valid responses, adequate for regression and correlation analysis.

Primary data were collected via a 30-item structured questionnaire (Google Forms) covering demographics, behavioural biases, psychological traits, and investment performance, using five-point Likert, frequency, and importance scales. Content validity was confirmed through expert review, and internal consistency via Cronbach's Alpha (0.874, very good reliability). Data were coded and analysed in Microsoft Excel using descriptive statistics, Multiple Regression Analysis

(behavioural biases → performance), and Pearson Correlation Analysis (psychological traits ↔ performance), following standard ethical protocols for informed consent and confidentiality.

5. Data Analysis and Results

5.1 Reliability and Sample Profile

Table 2. Reliability Statistics (Cronbach's Alpha)

Description	Value
No. of items	20
Sum of items	14.13
Variance of total score	86.58
Cronbach's Alpha	0.874

Table 3. Sample Profile (N = 153)

Profile	Category	Percentage
Age	26–34 years (largest group)	36.60%
Gender	Male	59.48%
Occupation	Salaried employees (largest group)	58.17%
Monthly Income	₹26,000–₹40,000 (largest group)	36.60%

Cronbach's Alpha of 0.874 confirms strong reliability. Respondents were predominantly aged 26–34, male, salaried, and middle-income.

5.2 Objective 1 -Behavioural Biases and Investment Performance

Table 4. Regression Model Summary & ANOVA

Regression Statistic				Value		
Multiple R				0.6200		
R Square				0.3844		
Adjusted R Square				0.3720		
Standard Error				0.5053		
Observations				153		
Source	df	SS	MS	F	Significance F	
Regression	3	23.754	7.918	31.018	1.226E-15	
Residual	149	38.036	0.255			
Total	152	61.791				

Table 5. Regression Coefficients

Predictor	Coefficient (β)	Std. Error	t Stat	P-value
Intercept	1.890	0.239	7.910	5.34E-13
Herding Behaviour	0.163	0.063	2.595	0.0104
Loss Aversion	0.189	0.075	2.516	0.0129
Overconfidence Bias	0.199	0.067	2.987	0.0033

The model is statistically significant (Significance F = 1.226×10^{-15} , $p < 0.05$), with $R^2 = 0.3844$: behavioural biases explain $\approx 38\%$ of the variance in investment performance. Herding ($\beta = 0.163$, $p = 0.010$), Loss Aversion ($\beta = 0.189$, $p = 0.013$), and Overconfidence Bias ($\beta = 0.199$, $p = 0.003$) are all significant, with Overconfidence showing the strongest effect. H_{01} is rejected and H_{11} accepted: behavioural biases significantly impact investment performance.

5.3 Objective 2 -Psychological Traits and Investment Performance

Table 6. Correlation Summary & Matrix

Description	Value
Correlation Coefficient (r)	0.342
N	152
P-value	1.614×10^{-5}

	Confidence	Risk-Taking Ability	Emotional Stability	Self-Discipline	Investment Performance
Confidence	1				
Risk-Taking Ability	0.667	1			
Emotional Stability	0.628	0.658	1		
Self-Discipline	0.652	0.628	0.598	1	
Investment Performance	0.665	0.597	0.628	0.583	1

The correlation ($r = 0.342$, $p < 0.001$) indicates a significant, moderate positive relationship between psychological traits and performance. Confidence shows the strongest individual association ($r = 0.665$), followed by Emotional Stability (0.628), Risk-Taking Ability (0.597), and Self-Discipline (0.583); all four traits are also strongly inter-correlated, suggesting a cohesive psychological profile. H_{02} is rejected and H_{12} accepted: psychological traits are significantly and positively related to investment performance.

6. Discussion

The findings provide strong empirical support for behavioural finance theory among Indian retail investors. The significant effects of herding, loss aversion, and overconfidence align with prior literature on emerging markets. Overconfidence emerged as the strongest predictor, consistent with studies linking excess confidence to overtrading and inflated return expectations; loss aversion mirrors Prospect Theory's prediction that losses are weighted more heavily than gains; and herding reflects retail investors' tendency to imitate others in the absence of institutional research infrastructure.

The moderate positive correlation between psychological traits and performance supports the Theory of Planned Behaviour: stable traits such as confidence, emotional regulation, self-discipline, and risk tolerance shape the consistency of financial decision-making. Confidence showed the strongest individual association, and the strong inter-correlations among traits suggest they function as a cohesive dimension of investor discipline rather than independent qualities. Overall, biases represent situational errors distorting specific decisions, while traits represent the dispositional capacity to manage those errors -improving investment outcomes requires addressing both.

7. Implications

7.1 Theoretical

The study extends behavioural finance literature by linking specific biases and traits directly to measurable performance, contributing Indian retail-market evidence and jointly applying Behavioural Finance Theory, Prospect Theory, and the Theory of Planned Behaviour within one framework.

7.2 Practical -Investors, Advisors and Policymakers

Retail investors can improve outcomes by using predefined entry/exit rules, seeking independent analysis before following trends, and cultivating emotional stability, self-discipline, and calibrated confidence. Financial advisors and fintech platforms can incorporate behavioural assessments and decision-support nudges (bias-awareness prompts, cooling-off periods) into advisory and trading processes. Policymakers can support investor-education programmes that address behavioural and psychological readiness, not just financial literacy, given the rapid growth of retail market participation in India.

8. Conclusion

This study examined how behavioural biases and psychological traits influence retail investment performance using data from 153 Indian investors. Behavioural biases -herding, loss aversion, and overconfidence -significantly impact performance, jointly explaining 38.44% of its variance, while psychological traits -confidence, emotional stability, self-discipline, and risk-taking ability -show a significant, moderate positive relationship with performance.

These results confirm that retail investment performance is shaped not only by financial knowledge but by how investors think, feel, and behave under uncertainty. Both dimensions emerge as significant, independent contributors to investment success, reinforcing behavioural finance's central premise: improving outcomes requires managing behavioural tendencies alongside cultivating the psychological qualities that support rational, disciplined investing.

9. Limitations and Future Research

Self-reported responses rather than verified brokerage/transaction records; cross-sectional design capturing a single point in time.

Scope limited to three behavioural biases and four psychological traits; other recognised factors were excluded.

Sample of 153 investors may limit generalisability; external factors (financial literacy, macroeconomic conditions) were not modelled.

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