

Behavioural Biases and Investment Decision-Making among Individual Investors: Evidence from Bengaluru, India

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ABSTRACT

Abstract

Purpose. This study examines the relationship between behavioural biases and investment decision-making among individual investors in Bengaluru, focusing on overconfidence, loss aversion, anchoring and herding.

Design/methodology/approach. Primary data were collected from 155 individual investors using a structured questionnaire measured on a five-point Likert scale. Convenience sampling was used. Descriptive statistics, Pearson correlation and multiple linear regression were conducted using SPSS.

Findings. Overconfidence and loss aversion show statistically significant positive relationships with investment decisions ($r = 0.647$ and $r = 0.551$, respectively; $p < 0.001$). Anchoring and herding show no statistically significant association. The regression model explains 68.3% of the variance in investment decisions (adjusted $R^2 = 0.675$). Overconfidence and loss aversion are significant predictors, while anchoring and herding are not.

Originality/value. The study contributes location-specific evidence on behavioural finance among retail investors in Bengaluru. The findings have implications for investor education, financial advice and behavioural interventions aimed at reducing the adverse consequences of cognitive and emotional biases.

Keywords: behavioural finance; overconfidence; loss aversion; anchoring; herding; investment decisions; individual investors; Bengaluru

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1. Introduction

Conventional finance assumes that investors process available information rationally and make decisions that maximise expected utility. Behavioural finance challenges this assumption by demonstrating that investors may systematically depart from rationality because of cognitive limitations, emotions and social influences [1–4].

Individual investors may therefore interpret information selectively, underestimate risk, react disproportionately to losses, rely on reference points or imitate the decisions of others. Such behavioural tendencies can influence trading frequency, asset selection, diversification and perceived risk.

The Indian retail-investment environment has changed considerably with the expansion of digital investment platforms, financial information and direct market participation. Bengaluru is particularly relevant because of its large population of digitally active and professionally diverse investors. Understanding behavioural influences in this setting can help financial advisers and investor-education programmes design more targeted interventions.

The present study investigates four widely discussed biases—overconfidence, loss aversion, anchoring and herding—and examines their relationship with investment decision-making among individual investors in Bengaluru.

2. Problem Statement

Although behavioural biases have been extensively discussed in behavioural-finance research, the strength and significance of individual biases may differ across investor populations and market

contexts. An investor may display confidence without necessarily relying on social cues, while another may react strongly to losses but remain relatively unaffected by anchoring.

The research problem is therefore to determine which behavioural biases have a statistically meaningful association with investment decisions among individual investors in Bengaluru and whether the combined biases provide significant explanatory power.

3. Research Objectives

1. To examine the relationship between behavioural biases and investment decisions among individual investors in Bengaluru.
2. To identify the behavioural biases that significantly influence individual investment decisions.
3. To assess the relative contribution of overconfidence, loss aversion, anchoring and herding to investment decision-making.
4. To provide implications for investor education and financial advisory practice.

4. Hypotheses

H01: There is no significant relationship between behavioural biases and the investment decisions of individual investors.

H02: Overconfidence, loss aversion, anchoring and herding do not significantly influence the investment decision-making process of individual investors.

For clearer statistical interpretation, H02 is evaluated at the individual-predictor level: each coefficient is assessed using its p-value, while the overall model is assessed using the model F-test.

5. Literature Review

Overconfidence. Overconfidence can cause investors to overestimate their knowledge or ability to predict market outcomes. Excessive confidence may encourage frequent trading, concentrated portfolios and insufficient attention to downside risk [1,5].

Loss aversion. Prospect theory proposes that individuals experience losses more intensely than equivalent gains, which can affect risk-taking and the disposition to hold losing investments [2,6]. Loss aversion may lead investors to avoid otherwise suitable opportunities or retain loss-making assets for too long.

Anchoring. Anchoring occurs when individuals rely excessively on an initial reference value when making subsequent judgments. In financial markets, investors may anchor on purchase prices, historical highs, target prices or other salient values [7].

Herding. Herding refers to the tendency to align investment behaviour with that of other investors. It may become stronger when information is uncertain and investors use the behaviour of others as a signal [3,8].

Research gap. Existing studies document individual behavioural biases across markets, but their relative influence can vary by investor population and context. The present study addresses this gap by jointly examining four biases among individual investors in Bengaluru.

6. Methodology

6.1 Research Design

The study uses a descriptive and analytical cross-sectional research design. Primary data were collected from 155 individual investors in Bengaluru through a structured questionnaire.

6.2 Sampling

Convenience sampling was used because respondents were selected based on accessibility and voluntary participation. The sampling approach limits the generalisability of the findings to the broader population of Bengaluru investors.

6.3 Measurement

The questionnaire included demographic information and Likert-scale statements measuring overconfidence, loss aversion, anchoring, herding and investment decisions. All constructs were measured using a five-point response scale.

6.4 Reliability

The source manuscript reports Cronbach's alpha values above 0.70 for all variables, indicating acceptable internal consistency. The final journal submission should include the exact alpha value for each construct rather than only the threshold statement.

6.5 Data Analysis

SPSS was used for analysis. Descriptive statistics summarised the variables, Pearson two-tailed correlation examined bivariate relationships, and multiple linear regression assessed the simultaneous contribution of the four behavioural biases to investment decisions.

7. Results and Analysis

7.1 Descriptive Statistics

Variable	Mean	Std. Deviation
Overconfidence	2.9887	0.8778
Loss aversion	3.0	0.8622
Anchoring	2.9871	0.8584
Herding behaviour	3.0	0.8679
Investment decisions	3.0322	0.7717

The mean values are close to 3.00 for all constructs, indicating moderate levels of the measured behavioural tendencies and investment-decision orientation in the sample. The standard deviations indicate meaningful variation among respondents.

7.2 Pearson Correlation Analysis

Variable	Investment decisions (r)	p-value	Interpretation
Overconfidence	0.647	<0.001	Strong positive, statistically significant
Loss aversion	0.551	<0.001	Moderate-to-strong positive, statistically significant
Anchoring	0.012	0.878	No statistically significant relationship
Herding	0.011	0.897	No statistically significant relationship

Overconfidence has the strongest reported association with investment decisions ($r = 0.647$, $p < 0.001$), followed by loss aversion ($r = 0.551$, $p < 0.001$). Anchoring and herding have near-zero correlations and are not statistically significant. These results support rejection of the corresponding null hypotheses for overconfidence and loss aversion, but not for anchoring and herding.

Because the study is cross-sectional and based on self-reported responses, these correlations should be interpreted as associations rather than causal effects.

7.3 Multiple Linear Regression

Statistic	Value
R	0.827
R ²	0.683
Adjusted R ²	0.675
Std. Error of Estimate	0.44
Durbin-Watson	2.006

The regression model explains 68.3% of the variance in investment decisions, with an adjusted R² of 0.675. The Durbin-Watson value of 2.006 is close to 2, suggesting no obvious first-order autocorrelation concern in the residuals.

Predictor	B	Std. Error	Beta	t	p-value	95% CI for B
Constant	-0.165	0.249	—	-0.662	0.509	[-0.656, 0.327]
Overconfidence	0.54	0.04	0.614	13.341	<0.001	[0.460, 0.620]
Loss aversion	0.463	0.041	0.517	11.194	<0.001	[0.381, 0.545]
Anchoring	0.038	0.041	0.043	0.926	0.356	[-0.043, 0.120]
Herding	0.027	0.041	0.03	0.652	0.515	[-0.054, 0.107]

The regression results indicate that overconfidence is the strongest predictor of investment decisions ($\beta = 0.614$, $p < 0.001$), followed by loss aversion ($\beta = 0.517$, $p < 0.001$). Anchoring ($\beta = 0.043$, $p = 0.356$) and herding ($\beta = 0.030$, $p = 0.515$) are not statistically significant predictors.

The relative beta coefficients suggest that overconfidence has the larger standardized contribution within this model. Importantly, the positive coefficients should not automatically be interpreted as

beneficial effects; they indicate that higher scores on the measured bias construct are associated with higher scores on the investment-decision measure.

7.4 Hypothesis Testing

Hypothesis	Statistical evidence	Decision
H01: No significant relationship between behavioural biases and investment decisions	Overconfidence and loss aversion are significant; anchoring and herding are not.	Partially reject/support at individual-bias level; overall relationship is supported by the significant model.
H02: No behavioural bias significantly influences investment decisions	Overconfidence $p < 0.001$; loss aversion $p < 0.001$; anchoring $p = 0.356$; herding $p = 0.515$.	Reject for overconfidence and loss aversion; fail to reject for anchoring and herding.

8. Discussion

The results indicate that behavioural influences are not homogeneous across investors. Overconfidence emerges as the strongest predictor, consistent with behavioural-finance research suggesting that excessive confidence can influence perceived skill, risk assessment and trading decisions [1,5].

Loss aversion is also a significant predictor. This is consistent with the central proposition of prospect theory that losses have a disproportionate psychological impact relative to gains [2,6].

In contrast, anchoring and herding do not significantly predict investment decisions in this sample. This does not mean that these biases are absent from financial markets. Rather, their effects may depend on market conditions, investor characteristics, information availability and measurement design. The findings therefore support a context-dependent interpretation of behavioural biases.

The high adjusted R^2 indicates substantial explanatory power for the model within this sample. However, the result should not be interpreted as evidence that behavioural biases causally

determine investment decisions because the study uses a cross-sectional convenience sample and self-reported measures.

9. Practical Implications

9.1 Investor Education

Investor-education programmes should focus particularly on overconfidence and loss aversion. Training can include self-assessment of investment knowledge, portfolio diversification exercises, scenario-based loss simulations and pre-investment checklists.

9.2 Financial Advisory Practice

Financial advisers can use structured decision frameworks to encourage investors to document risk tolerance, investment objectives and evidence before acting. Advisers should be particularly attentive to clients who exhibit excessive confidence or strong emotional responses to losses.

9.3 Digital Investment Platforms

Digital platforms can incorporate behavioural prompts, diversification reminders, risk disclosures and cooling-off mechanisms for unusually frequent or concentrated trades. Such interventions should be designed to inform rather than manipulate investors.

10. Limitations and Future Research

The study has several limitations. The use of convenience sampling limits generalisability, and the sample size of 155 respondents may not represent the full diversity of Bengaluru investors. The study also relies on self-reported behavioural measures rather than observed transaction records. Cross-sectional data prevent strong causal conclusions.

Future studies should use probability sampling, larger multi-city samples and longitudinal designs. Researchers could combine questionnaire measures with actual trading records to examine whether reported biases predict realised portfolio outcomes. Future models could also test demographic and financial-literacy variables as moderators or mediators.

11. Conclusion

This study demonstrates that behavioural biases are relevant to individual investment decision-making, but their influence differs across bias types. Overconfidence and loss aversion show statistically significant relationships with investment decisions and are significant regression predictors, whereas anchoring and herding are not significant in the present sample.

The findings reinforce the relevance of behavioural finance to understanding retail investors in Bengaluru. They also suggest that investor education should move beyond general financial knowledge toward behavioural self-awareness, particularly regarding excessive confidence and reactions to losses.

The study provides useful empirical evidence, while its convenience sample and cross-sectional design require cautious interpretation. Future research combining behavioural measures with actual investment outcomes can provide stronger evidence on how biases translate into financial performance.

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