

Emotional Bias and Investment Decisions: A Psychological Perspective on Investor Performance

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ABSTRACT

Complex interactions between market dynamics and investor psychology lead to formation of financial bubbles and crashes in the capital market. The study involved an empirical analysis of how psychological factors like risky behaviour, overconfidence bias, and herd behaviour collectively shape investment performance during periods of ups and downs in the markets. Primary data was collected from 100 respondents from Western Mumbai, through a structured questionnaire. This research is based on behavioural finance framework to examine how these cognitive and emotional biases lead to wrong risk perception, inflate asset valuations, and impact returns on investments. The study reflects that increasing risk-taking tendencies, mis calibrated confidence in personal judgment, and conformity-driven decision patterns significantly affects the investment performance. These findings stress the critical role of psychological factors in driving market inefficiencies and emphasize the urge for integrating behavioural insights into investment strategy, policy design, and risk management systems..

Keywords: Risk behaviour, Overconfidence bias, Herd behaviour, Investment performance, Behavioural finance..

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INTRODUCTION:

Traditional finance theory states that investors always behave in rational manner while trading in the capital market. Traditional theory is based on rational expectation hypothesis assumes that investors are rational. It is believed that they use all the available information to the fullest extent to make informed decisions. However, studies in the later period found that psychological factors dominate investor behaviour in the capital markets. Behavioural biases like herd behaviour, overconfidence, loss aversion are always found to be dominant in the formation of financial bubbles. Consequently, leading to bursting and high loss of investor's wealth. Overconfidence bias among investors leading to excessive buying and selling of stock by taking risk, herd mentality promotes price fluctuations that subsequently crashes the markets as investors follow each other's actions (Xue, 2025; Gupta, 2025; Andraszewicz, 2020; Goldstein & Knight, 2023; Ricciardi, 2017; Sun & Li, 2019; Sankhla, 2024; Chaudhari & Ghuge, 2025; Khan et al., 2025; Lehnert, 2020; Sornette, 2017). The frequent movements of speculation and panic trading are results of emotional triggers like fear and euphoria with loss aversion intensifying selloffs during falling market (Xue, 2025; Gupta, 2025; Ricciardi, 2017; Sankhla, 2024; Chaudhari & Ghuge, 2025; Khan et al., 2025; Lehnert, 2020).

Literature Review:

Under the literature review section, findings from research papers are synthesized for exploring how psychological factors shape bubbles, crashes, investment performance, and risk behaviour in financial markets.

Performance of Investment:

The literature indicates that psychological biases dominate the investor performance during bubbles and crashes. Investors who are influenced by biases of overconfidence and familiarity are more likely to be victims and face losses, sophisticated investors who collect authentic information and possess analytical skills tend to perform better than others (Quinn & Turner, 2025; Barbon & Ranaldo, 2023). Excessive trading, driven by overconfidence leads to lower returns (Sun & Li, 2019; Khan et al., 2025). The investors who had exposure of previous bubbles can increase risk-appetite in subsequent cycles, irrespective of past experiences (Goldstein & Knight, 2023).

Dynamics of market

Investors trading behaviour is often influenced by fluctuations in risk perception and tolerance. It is often found that, even during the falling market most investors continue to invest actively rather than de-risking portfolios in spite of rise in risk aversion and fall in profit expectations (Hoffmann et al., 2012; Lehnert, 2020). Cognitive biases such as anchoring, recency, and status quo bias further shape risk attitudes and investment decisions (Ricciardi, 2017; Khan et al., 2025).

Modern times - Asset Classes and Technological Factors

Studies found that psychological insights also influence new asset classes like digital currencies and NFTs. Studies found similar patterns of emotional and behavioural drivers are observed in formation of bubble and crashes (Fairchild et al., 2022; Sankhla, 2024; Park & Yang, 2024; Barbon & Ranaldo, 2023). AI and Machine learning models with bubble analysis can improve predictions of crashes, highlighting the role of prolonged bubble phases and factors like interest rates (Park & Yang, 2024).

External Monitoring and Market Stability

External factors, like investments from foreign countries, can mitigate crash risk through improved monitoring and governance, reducing the impact of managerial bad-news hoarding (Kim et al., 2020). Regulatory and educational interventions targeting behavioural biases are recommended to foster more rational investment and market stability (Gupta, 2025; Sun & Li, 2019; Khan et al., 2025).

Research Gap: Literature has been reviewed from various sources like journals, newspapers, magazines, websites which provided deep insights to the study of aspects related to Investment performance and the factors affecting it. The literature clearly shows that the investors do not behave in a rational manner in deciding about investment. They are victims of biases and behaves in an irrational manner in the market. This is against the traditional understanding that rationality is the basis of investor's behaviour in the markets. The three main factors affecting the investment performance in the capital markets are found to be Risk behaviour, Herd behaviour and Overconfidence. Literature is full of studies outside and in India highlighting the influence of psychological factors in investment behaviour, however no systematic has been undertaken on investors in western Mumbai. This study is an attempt to bridge this gap.

RESEARCH METHODOLOGY

Research Design:

The research design used in this study included both exploratory research design and descriptive Research Design. It involves problem identification, defining the research variables and formulating the hypothesis.

Objectives:

To study the factors affecting investment performance in the capital market.

To assess the influence of risk behaviour on investment performance on investment performance.

To analyse the impact of overconfidence bias on investors' decision-making.

Hypothesis:

The following statements have been formulated to determine the impact of variables Risk behaviour and Herd behaviour on the investment performance.

Hypothesis 1

Null Hypothesis (H1₀): There is no significant Influence of risk behaviour on the investment performance.

Alternative Hypothesis(H1_A): There is significant Influence of risk behaviour on the investment performance.

Hypothesis 2

Null Hypothesis (H1₀): There is no significant Influence of herd behaviour on the investment performance.

Alternative Hypothesis(H1_A): There is significant Influence of herd behaviour on the investment performance.

Data Collection

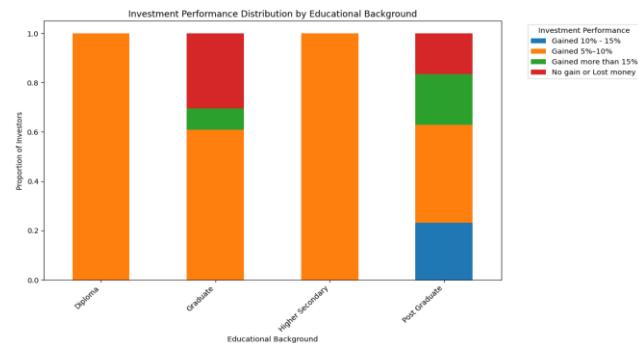
Primary Data: Primary data was collected through a structured questionnaire to survey 100 respondents who invests in the security markets. Convenience and snowball sampling design is employed to select 100 respondents from western Mumbai region.

Desk Research: Secondary data was collected from Books, Journals, Periodicals, Daily Newspapers for understanding the behaviour of investors in the capital markets.

Data Analysis : The data analysis

Descriptive Analysis

Distribution of Investment performance by educational background: The levels of attainment of education by an investor is supposed to be an important determinant of investment performance in many ways.

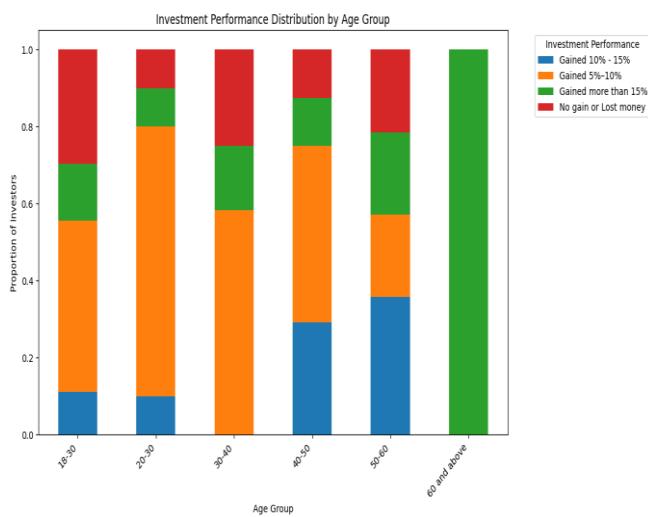


The above diagram shows the performance of investment and the basis of educational background. It shows that the range of 5%–10% gain is the most common across almost all education levels, indicating that moderate returns dominate investor experiences. Postgraduates display a larger spread in performance from losses to high gains. This indicates greater engagement with markets, diversified strategies and broader risk profile. Graduates exhibit middle-level diversity with some achieving high gains and many experiencing moderate gains.

It can be suggested that education level influences investment performance, not necessarily by guaranteeing better outcomes, but by shaping risk-taking behaviour, investment awareness, and strategy diversification. The level of maturity and experience attained through education positively influences the investment performance.

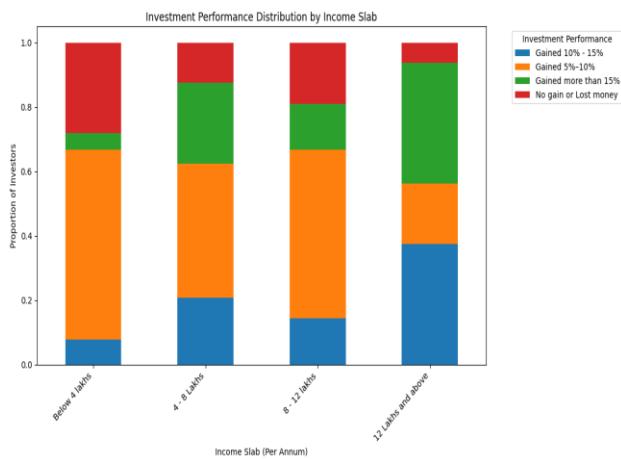
Distribution of Investment performance by age group: The age of an investor is found to be affecting the

investment performance due to variation in risk appetite leading to various investment strategies.



Almost all age groups experienced moderate gains (5%–10%), especially from 18–40. more stable and improved investment performance is observed among age group of 40–60, showing more financial knowledge and expertise. The education enhances the understanding of market fluctuations and maturity. The senior citizens demonstrate exceptionally high performance, likely influenced by extra time for analysis and better management of investment. The data suggests that there is positive correlation between age group and Investment performance.

Distribution of Investment performance by income level: The level of income of an investor is found to be an important determinant of investment performance. Every individual personal finance goal defers according to their income level and wealth accumulation.

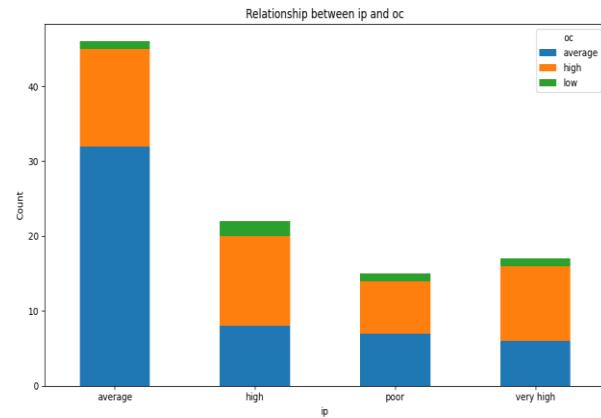


The chart shows that investment performance progress with rising incomes. Higher-income groups display a higher proportion of high-return categories. Most of the low-income investors achieved moderate gains due conservative investment behaviour.

Lower rates of no gain/loss are observed among higher-income groups, indicating better decision-making, awareness, and diversification. The highest income group demonstrates the strongest performance, with the largest share achieving returns above 15%. The analysis

highlights direct relationship between income level and Investment performance.

Relationship between Investment performance and overconfidence: The analysis of collected data indicates that over confidence can be risky.



The above chart shows that high overconfidence is seen in both the categories of top and poor performers. This indicates that overconfidence can produce either very high gains or major losses. Average confidence is seen across all performance categories and forms the largest overall group. This indicates overconfidence is the most stable and balanced trait. Low overconfidence is observed the least common but occurred in all outcome categories. This suggests that being too much cautious may restrict both extreme performances.

Inferential Analysis

To understand the association investment performance with variables risk behaviour and herd behaviour, Chi-square test has been conducted on google collab platform using AI generated python codes.

The results of the test are as follows:

Hypothesis 1

Null Hypothesis (H10): There is no significant Influence of risk behaviour on the investment performance.

Alternative Hypothesis(H1A): There is significant Influence of risk behaviour on the investment performance.

Chi-square statistic (χ^2) = 15.758

p-value = 0.015

Significance level (α) = 0.05

Since the p-value is less than the 0.05 threshold, the null hypothesis of independence is rejected.

This indicates that Investment performance varies significantly across different categories of risk behaviour. Risk behaviour is proved to be an important correlate of investment performance. Hence, the relationship observed in the contingency table is unlikely to be due to chance.

There is a statistically significant association between investment performance and risk behaviour. variation in

investment performance depends on differences in risky appetite of the investors.

Hypothesis 2

Null Hypothesis (H1₀): There is no significant Influence of herd behaviour on the investment performance.

Alternative Hypothesis(H1_A): There is significant Influence of herd behaviour on the investment performance.

Chi-square statistic (χ^2) = 8.009

p-value = 0.237

Significance level (α) = 0.05

Since the p-value is greater than 0.05, there is no significant association between investment performance and herd behaviour of the investors. Investors with high, medium, or low herd behaviour did not differ significantly in their investment performance.

The distribution of investment performance appears similar across different levels of herd behaviour. Any differences that exist in the contingency table are likely due to chance rather than a meaningful pattern.

CONCLUSION:

The study suggests that investors' risk behaviour scores (calculated from responses to Likert-scale questions) are meaningfully related to the performance of their investment. In practical terms, differences in risk appetite appear to correspond with observable differences in how well individuals perform in their investments. These findings align with behavioural finance theory, which argues that risk preference is a key determinant of investment decisions and outcomes

The chi-square analysis of the association between investment performance (IP) and herd behavior (RB)

indicates statistically insignificant relationship. Investors who exhibit higher or lower herd behaviour do not different performance outcomes. These findings do not align with behavioural finance theory, which argues that herd behaviour is a key determinant of investment decisions and outcomes.

These findings support the core principles of behavioural finance for risk behaviour but does not for herd behaviour. The individual psychological traits and risk preferences may play a crucial role in shaping investment decisions and performance.

Because of statistical evidence of the study, it can be concluded that investment performance is significantly influenced by risk behaviour of the respondents. The results strengthen the argument that investors' behavioural attributes should be considered when assessing portfolio strategies and investor outcomes.

SUGGESTIONS:

According to above findings, it can be suggested that investors develop greater awareness of their own risk behaviour and herd behaviour to understand how it may affect investment decisions. Financial literacy should be made a policy priority by government and regulatory bodies. The advisors and educators should enable investors to assess their risk tolerance using structured tools, as this may help align investment choices with personal goals and behavioural tendencies.

SCOPE FOR FURTHER RESEARCH:

Explore which specific aspects of risk behaviour—such as willingness to take financial risks, comfort with uncertainty, or past investment experiences—contribute most strongly to performance outcomes. Longitudinal studies may also help determine whether risk behaviour is stable over time or shifts with market conditions..

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