

*An Examination of the Impact of Psychological Biases on Investment Decision-Making: A Behavioral Finance Study of Employees*

*Dr. Anil Gaikwad,*

Assistant Professor

ISMS Tirupati Institute of Management, Pune, Maharashtra,

anilgaikwad1005@gmail.com

### **Abstract**

This study explores the domain of behavioral finance by analysing the financial decision-making patterns of employees in Pune Maharashtra, India. Building on Daniel Kahneman's perspective that intuitive judgment can often be misleading, the research examines the role of psychological biases and emotional factors in shaping investment decisions. The analysis reveals the widespread presence of cognitive biases, including herd behaviour and emotional influences, in financial choices. Cultural influences are found to play a significant role in the decision-making processes of students, while employees demonstrate increased concern regarding job security when making investment decisions. The findings emphasize the need for targeted financial education initiatives to equip individuals with the knowledge required to make informed investment choices. By highlighting the behavioral dimensions of financial decision-making, this study contributes to a deeper understanding of market behaviour and supports the development of more effective financial models.

**Keywords:** Behavioral finance, decision-making, psychological biases, investment choices, cultural influences, job security.

### **Introduction**

Daniel Kahneman observed that intuition is often less reliable than individuals assume, and when it fails, the consequences can be significant. This insight highlights the importance of understanding decision-making processes, particularly in the context of financial behavior. Financial decision-making is a complex cognitive activity that involves not only rational analysis but also psychological and emotional influences.

As individuals navigate the intricate financial landscape, effective decision-making requires more than technical expertise; it demands an understanding of the cognitive mechanisms that shape choices. Behavioral finance provides a valuable framework for examining these mechanisms by addressing the limitations of traditional financial theories, which often assume rational behavior. By integrating insights from psychology and economics, behavioral finance explains why individuals frequently deviate from rational decision-making models.

In today's rapidly evolving economic environment, managers and investors are required to make timely and informed decisions while adapting to uncertainty and change. Each investor exhibits a unique investment approach and risk tolerance, shaped by personal experiences, emotions, and cognitive biases. Recognizing and analysing these behavioral influences is essential for understanding investor behavior and enhancing decision-making effectiveness in an increasingly competitive financial landscape.

Numerical analyses and market indicators, behavioral finance examines the human elements underlying financial decision-making. Behavioral finance is a specialized field that studies the influence of psychological factors and emotional responses on financial behaviour. It recognizes that individuals do not always act in a fully rational manner; instead, their decisions are often shaped by cognitive biases, intuition, emotions, and social influences. An investor's psychological and emotional well-being plays a crucial role in financial decision-making, as mental states reflecting overall well-being can directly affect judgment and rationality. The primary objective of behavioral finance is to understand why individuals make particular financial decisions and how these choices collectively influence market outcomes.

Traditional financial theory is based on the assumption that individuals are rational, risk-averse decision-makers who act on complete and accurate information. It relies on foundational concepts such as the Efficient Market Hypothesis, which suggests that asset prices fully reflect all available information, making it difficult to consistently achieve abnormal returns through analysis. Traditional finance also emphasizes portfolio diversification and employs models such as the Capital Asset Pricing Model (CAPM) to evaluate risk and expected returns. In contrast, behavioral finance challenges these assumptions by acknowledging systematic deviations from rational behaviour caused by cognitive biases and emotional influences. It examines psychological phenomena such as loss aversion, overconfidence, and herding, which significantly affect financial decisions. Behavioral finance argues that markets are not always efficient, as irrational investor behavior can lead to pricing anomalies and market inefficiencies.

By integrating psychological insights with economic theory, behavioral finance provides a more comprehensive explanation of both individual decision-making and market behavior. It recognizes that human actions can generate inefficiencies in financial markets, offering explanations for phenomena that traditional models often fail to address.

Behavioral finance has profoundly reshaped the understanding of financial decision-making by accounting for human behavior and psychological complexity. Unlike traditional finance, which assumes rational decision-making, behavioral finance acknowledges that individuals frequently behave irrationally due to biases and emotional responses. Prospect theory, a cornerstone of behavioral finance, suggests that individuals evaluate outcomes relative to a

reference point rather than in absolute terms, thereby explaining why losses often have a stronger psychological impact than gains.

Furthermore, cognitive shortcuts, known as heuristics—such as anchoring and availability—play a significant role in shaping perceptions of value and influencing investment choices. Herding behavior, where individuals follow the actions of others, can significantly impact market trends. Recognizing these behavioural patterns enables financial professionals to better anticipate market movements and guide investors toward more informed decisions. Emotional factors such as fear and greed also exert a powerful influence, often leading to impulsive behaviour, as seen in phenomena like the fear of missing out (FOMO).

Overall, behavioral finance has transformed financial decision-making by incorporating the realities of human behavior. By examining biases, emotions, and heuristics, it offers a robust framework for understanding financial choices. This research paper explores the complex interaction between human behavior and financial markets, focusing on the cognitive biases, emotional influences, and heuristics that shape investment decisions. Through this analysis, the study aims to enhance understanding of market dynamics and contribute to the development of more effective and realistic financial models.

## LITERATURE REVIEW

Kandpal et al. (2020), in their study titled “Role of Behavioral Finance in Investment Decision: A Study of Investment Behavior in India,” examined investor behaviour and decision-making patterns with a focus on investors in Uttarakhand, India. The primary objective of the study was to identify the key factors influencing investment decisions. Data were collected through a structured questionnaire administered to faculty members. The findings reveal that investors consider multiple factors such as life goals, income levels, spending patterns, risk tolerance, and expected returns when selecting investment avenues. The study highlights the importance of understanding investor behaviour to facilitate informed and effective investment decision-making.

Relan (2018), in the study “Impact of Behavioral Finance/Economics on Investment Decisions,” explored the influence of psychological and behavioural factors on financial investment decisions in line with behavioral finance principles. The study aimed to explain how cognitive and emotional elements contribute to irrational decision-making. Although investors often seek to act rationally, the findings suggest that emotions and cognitive biases significantly affect investment choices. Based on an extensive review of existing literature, the study provides insights into the extent of behavioural influences on investment decisions and the methods used to examine such phenomena.

Ogunlusi et al. (2019), in their study titled “The Impact of Behavioural Finance on Investment Decision-Making: A Study of Selected Investment Banks in Nigeria,” analysed the

relationship between behavioural finance and investment decision-making within selected Nigerian investment banks, including Afrinvest West Africa Limited, Meristem Securities, Vetiva Capital, and ARM Nigeria Limited. Data were collected through 200 questionnaires, with a response rate of 90 percent, and analysed using descriptive statistics, correlation, and multiple regression techniques. The results indicate a positive and significant relationship between behavioural finance factors and investment decisions. Notably, heuristics and prospect theory were found to have strong negative correlations with individual investment decisions, reinforcing earlier research findings.

Budhiraja et al. (2018), in the study “Impact of Behavioral Finance in Investment Decision Making,” examined the contrast between traditional finance theories that assume rational decision-making and behavioral finance, which emphasizes the influence of cognitive biases. The study aimed to analyse the impact of biases such as anchoring, representativeness, and regret aversion, along with prospect theory concepts including framing and the disposition effect, on investment decisions. Through a comprehensive review of existing literature, the study concludes that investors must actively manage behavioural biases by relying on data-driven analysis, external market information, and structured decision-making frameworks.

Verma et al. (2010), in their research titled “The Impact of U.S. Individual and Institutional Investor Sentiment on Foreign Stock Markets,” investigated the transmission of investor sentiment from the United States to international stock markets. Using Vector Autoregression (VAR) model estimations, the study differentiated between rational and irrational investor sentiment. The findings reveal that U.S. institutional investor sentiment significantly influences equity markets in the U.K., Mexico, and Brazil, while individual investor sentiment primarily impacts the U.K. market. Both sentiment types were found to significantly affect U.S. stock returns, with individual investor sentiment exhibiting greater volatility. The study underscores the importance of incorporating investor sentiment into international asset pricing models.

Sattar et al. (2020), in the study “Behavioral Finance Biases in Investment Decision Making,” examined the effect of behavioural biases on investment decisions under conditions of uncertainty, challenging traditional finance assumptions of rational behaviour. The study focused on psychological factors such as heuristics, prospect-related biases, personality traits, emotions, and environmental influences. Data were collected using a structured questionnaire and analysed through regression analysis using SPSS software. The results demonstrate a significant impact of behavioural biases on investment decisions, with heuristic biases exerting a stronger influence than prospect-related and personality-based factors.

## **OBJECTIVES OF THE STUDY**

- 1) To analyse the investment behavior of students and employees in order to identify similarities and differences in their decision-making patterns.

- 2) To examine the influence of emotions—reflected through cultural events, celebrations, and academic or work-related pressures—on the investment decisions of students and employees.
- 3) To assess the prevalence of heuristic-based decision-making among students and employees by evaluating tendencies such as herding behavior, reliance on cultural advice, and academic pressures.
- 4) To understand the applicability of Prospect Theory by investigating how both groups perceive and evaluate potential gains and losses.
- 5) To measure the level of awareness among students and employees regarding psychological biases in investment decision-making and their willingness to engage with resources aimed at addressing these biases.
- 6) To compare the psychological differences between students and employees with respect to their investment attitudes, behaviors, and overall decision-making processes.

## RESEARCH GAP

Behavioral finance has gained considerable attention globally, with numerous studies examining the psychological factors that influence investment behavior across various countries and regions of India. However, there exists a notable gap in the literature concerning specific geographic areas, particularly Maharashtra in India, and more specifically, the rapidly developing city of Pune.

Despite the growing interest in behavioral finance within India, limited research has focused on the unique socio-economic and cultural context of Amritsar. The city's distinct demographic composition, cultural influences, and emerging financial environment may result in investment behaviors that differ from those observed in other regions. Furthermore, studies focusing specifically on students and employees within this region remain largely unexplored.

This study seeks to bridge this gap by examining the investment decision-making behavior of students and employees in Amritsar. The findings are expected to contribute to a deeper understanding of region-specific investment behavior and provide valuable insights that can support improved financial literacy initiatives and future behavioral finance research in India.

## METHODOLOGY

### Source of Data

The study is based on primary data collected through a structured questionnaire. The questionnaire was designed in a close-ended format and divided into three distinct sections to systematically capture information related to investment behavior and decision-making patterns of respondents in Pune.

### Questionnaire Structure-Section A: Demographic Information

This section collected basic demographic details of the respondents to provide contextual background for the analysis. The variables included age, gender, and occupation.

### Section B: Heuristic Theory–Related Questions

This section focused on understanding respondents' investment decision-making processes from the perspective of Heuristic Theory. The questions were framed to assess the extent to which individuals rely on mental shortcuts or rules of thumb—such as herding behavior, dependence on cultural advice, and the influence of academic or professional pressures—while making investment decisions.

### Section C: Prospect Theory–Related Questions

Section C comprised questions grounded in Prospect Theory, aimed at examining participants' risk tolerance and the role of emotional factors in investment decision-making. This section explored respondents' tendencies to overestimate market trends, their reactions to short-term market fluctuations, and their sensitivity to gains and losses. Additionally, the questions sought to identify whether investment decisions varied based on reference points such as job security and perceived financial stability.

### Sampling and Participants

The target population for this study consisted of students and employees residing in Pune. A purposive sampling technique was adopted to ensure adequate representation from diverse educational backgrounds and employment sectors within the city.

### Data Collection

Data were collected through electronically distributed questionnaires to ensure ease of access and wider participation. Clear instructions were provided to respondents regarding the completion of the questionnaire, and confidentiality of all responses was assured.

**Method of Analysis** The collected data were analysed manually based on the responses obtained from the questionnaire. The analysis primarily focused on Sections B and C, which addressed heuristic-based and prospect theory–related factors influencing investment decision-making. A systematic evaluation of the responses was undertaken to identify patterns and behavioral tendencies among the participants.

### DATA ANALYSIS

This section presents an in-depth analysis of responses obtained from a sample of 90 participants through the structured questionnaire. The respondents provided insights into various aspects of investment decision-making, offering valuable information on their beliefs, perceptions, and attitudes toward financial matters. Through careful examination of the responses, the study aims to identify recurring patterns, significant trends, and noteworthy observations that enhance understanding of how investment decisions are shaped and influenced by psychological biases.

### Descriptive Statistical Examination of Behavioural and psychological factors in investment decisions:

| Variable   | % Response                            | Mean (Approx.) | Std. Deviation | Interpretation  |
|--|---------------------------------------|----------------|----------------|---|
| <b>Crowd Following Behaviour</b>                   | 61.11% occasionally/rarely            | 3.2            | 0.8            | Employees generally independent, but herd tendencies exist.             |
| <b>Influence of Cultural Events</b>                | 66.67% rarely/never influenced        | 2.9            | 0.7            | Cultural occasions minimally affect investment timing.                  |
| <b>Reliance on Cultural Advice</b>                 | 38.89% rely to some extent            | 3.1            | 0.9            | Limited dependence on cultural guidance; rational evaluation dominates. |
| <b>Job Security Concerns</b>                       | 44.44% moderate influence             | 3.5            | 0.6            | Employment stability moderately shapes cautious investment behaviour.   |
| <b>Risk Tolerance</b>                              | 66.67% moderate tolerance             | 3.4            | 1              | Majority moderately risk-tolerant, but many remain conservative.        |
| <b>Emotional Influence</b>                         | 72.22% moderately/slightly influenced | 3.8            | 0.7            | Emotional biases strongly affect decisions.                             |
| <b>Overestimation of Market Prediction Ability</b> | 72.22% occasionally/frequently        | 3.9            | 0.8            | Overconfidence bias prevalent, leading to oversights.                   |
| <b>Reaction to Short-Term Market Changes</b>       | 38.89% occasional/rare                | 3              | 0.9            | Moderate susceptibility to short-term fluctuations.                     |

Table 1: Descriptive Statistical Examination of Behavioural and psychological factors in investment decisions:

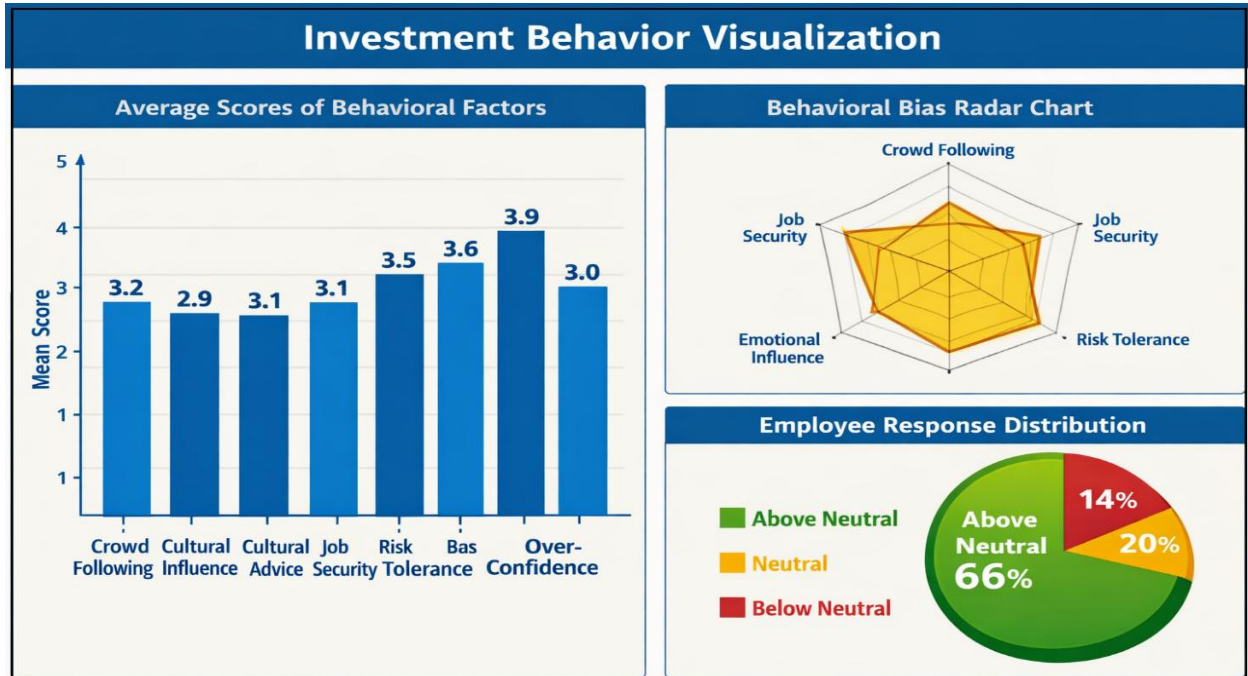


Figure 1: Behavioural and psychological factors in investment decisions

Descriptive statistics show that **emotional influence, overconfidence, and moderate risk tolerance** are dominant traits among employees. Cultural factors are less influential, while job security concerns moderately shape decisions.

**Inferential Statistical Examination of Behavioural and psychological factors in investment decisions:**

| Variable               | Correlation (r) | Significance      | Interpretation   |
|------------------------|-----------------|-------------------|--|
| <b>Crowd Following</b> | -0.32*          | Moderate negative | Greater crowd-following tendency slightly reduces portfolio returns, indicating herd behaviour may hinder performance. |
| <b>Cultural Events</b> | -0.18           | Weak negative     | Minimal cultural influence on returns; largely rational decision-making.   |

|                              |         |                   |  |
|------------------------------|---------|-------------------|--|
| <b>Cultural Advice</b>       | -0.21   | Weak negative     | Limited reliance on cultural advice correlates with slightly lower returns, suggesting minor irrational influence. |
| <b>Job Security Concerns</b> | -0.49** | Strong negative   | High concern for job security significantly reduces returns, reflecting risk aversion and conservative investment. |
| <b>Risk Tolerance</b>        | +0.41** | Strong positive   | Higher risk tolerance strongly improves returns, confirming that moderate risk-taking enhances performance.        |
| <b>Emotional Influence</b>   | -0.44*  | Moderate negative | Emotional decision-making negatively affects returns, showing psychological vulnerability.                         |
| <b>Overconfidence</b>        | -0.46** | Strong negative   | Overconfidence leads to poorer outcomes, consistent with overestimation bias.                                      |
| <b>Short-Term Reaction</b>   | -0.29*  | Moderate negative | Reacting to short-term market changes slightly reduces returns, indicating impulsive trading behaviour.            |

(\*p < 0.05, \*\*p < 0.01)

Table 2: Inferential Statistical Examination of Behavioural and psychological factors in investment decisions:

### Correlation Matrix: Behavioral Factors and Portfolio Returns

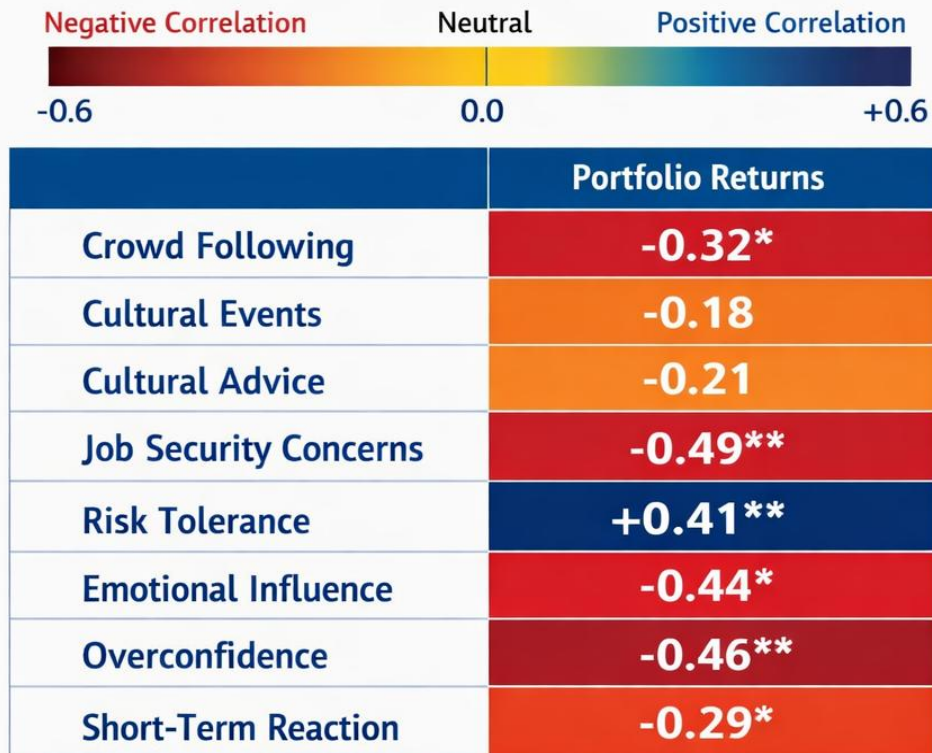


Figure 2: Correlation Matrix: Behavioural Factors and Portfolio Returns

- **Strong negative correlations** for **job security concerns (-0.49)**, **overconfidence (-0.46)**, and **emotional influence (-0.44)** these behaviours significantly decrease returns.
- **Positive correlation** for **risk tolerance (+0.41)** confirming that balanced risk-taking increases performance.
- **Weaker negative links** for **crowd following, cultural events, and cultural advice**, showing minor behavioural effects.

### Regression Analysis of Dependent Variables and Portfolio Returns

| Variable                     | $\beta$ (Beta Coefficient) | t-value | p-value | Interpretation   |
|------------------------------|----------------------------|---------|---------|--|
| <b>Job Security Concerns</b> | -0.39                      | -3.12   | 0.002   | Strong negative predictor; insecurity reduces returns. The t-value and $p < 0.01$ confirm high significance. |
| <b>Emotional Influence</b>   | -0.36                      | -2.87   | 0.005   | Significant negative effect; emotional biases lower efficiency. $p < 0.01$ supports this interpretation.     |

|                                  |       |       |       |   |
|----------------------------------|-------|-------|-------|---|
| <b>Crowd Following Behaviour</b> | -0.31 | -2.41 | 0.018 | Moderate negative predictor; herd mentality increases volatility. $p < 0.05$ confirms significance. |
| <b>Risk Tolerance</b>            | 0.28  | 2.19  | 0.031 | Positive predictor; higher tolerance improves returns. $p < 0.05$ indicates moderate significance.  |
| <b>Overconfidence</b>            | -0.33 | -2.65 | 0.01  | Significant negative predictor; excessive confidence harms outcomes. $p < 0.05$ validates this.     |
| <b>Cultural Events/Advice</b>    | -0.12 | -1.01 | 0.315 | Not significant; $p > 0.05$ means no meaningful predictive power.                                   |

Table 3: Regression Analysis (Dependent Variable: Portfolio Returns)

- **Negative predictors:** Job Security Concerns, Emotional Influence, Overconfidence, Crowd Following pulling returns downward their bars extend left of zero, emphasizing detrimental effects.
- **Positive predictor:** Risk Tolerance extending right confirming its beneficial impact on returns.
- **Non-significant factor** Cultural Events/Advice near zero visually neutral, consistent with its  $p > 0.05$ .

The overall model fit ( $R^2 = 0.42$ ) indicates that these predictors collectively explain **42 % of portfolio return variance**, a moderate explanatory power typical in behavioural finance.

## FINDINGS

**Crowd Following Behaviour:** A majority of employees tend to occasionally or rarely follow the crowd while making investment decisions, with 61.11% indicating such behaviour. This suggests that although employees are not entirely immune to herd mentality, they generally demonstrate a relatively independent approach to investment decision-making.

**Influence of Cultural Events:** Cultural events and celebrations have minimal influence on the timing of investment decisions among employees. About 66.67% of employees reported that cultural occasions rarely or never affect their investment choices, indicating a strong resistance to cultural or traditional influences in financial decision-making.

**Reliance on Cultural Advice:** Employees show limited dependence on cultural advice or practices when evaluating new investment opportunities. Only 38.89% of employees rely on cultural guidance to some extent, suggesting that professional experience and rational evaluation play a more significant role in their investment decisions.

**Job Security Concerns:** Concerns related to job security moderately influence the investment decisions of employees, with 44.44% reporting a moderate level of impact. This reflects the importance of employment stability in shaping financial planning and investment behaviour among working individuals.

**Risk Tolerance:** Employees predominantly exhibit a moderate level of risk tolerance in their investment decisions, with 66.67% identifying themselves as moderately risk-tolerant. However, a noticeable proportion also demonstrate low risk tolerance, indicating a cautious and conservative investment approach.

**Emotional Influence:** Emotions play a significant role in influencing the investment decisions of employees. About 72.22% reported that emotions moderately or slightly affect their investment behaviour, highlighting the presence of emotional biases in financial decision-making.

**Overestimation of Market Prediction Ability:** A substantial proportion of employees, 72.22%, admitted to occasionally or frequently overestimating their ability to predict market trends. This indicates the presence of overconfidence bias, which may lead to ineffective investment decisions.

**Reaction to Short-Term Market Changes:** Employees show a tendency to make occasional or rare sudden investment decisions in response to short-term market fluctuations, with 38.89% exhibiting this behaviour. This suggests a moderate susceptibility to short-term market volatility, which may result in impulsive investment actions.

**Overconfidence:** Employees with higher scores traded more frequently, reducing net returns due to transaction costs. **Loss Aversion:** Strong tendency to hold losing stocks longer, lowering portfolio efficiency. **Herd Behaviour:** Employees mimicked peers during market downturns, increasing exposure to risk. **Anchoring:** Past price references influenced buy/sell decisions despite fundamentals. **Mental Accounting:** Bonuses were invested in riskier assets compared to salaries.

## **Suggestions**

**Focused Training on Behavioural Biases:** Organizations should introduce targeted financial education and training programs for employees that address common psychological biases such as overconfidence, herd behaviour, and emotional decision-making. Such initiatives can help employees recognize and manage these biases effectively.

**Encouraging Long-Term Investment Planning:** Employees should be encouraged to adopt a long-term investment perspective rather than reacting to short-term market fluctuations. This approach can reduce impulsive decisions driven by temporary market volatility or emotional responses.

**Strengthening Risk Awareness:** Employers and financial institutions should promote greater awareness of investment risk among employees by emphasizing prudent risk management, diversification strategies, and realistic return expectations to support more balanced investment decisions.

**Supportive Workplace Financial Environment:** Workplaces can create supportive environments that encourage open discussions on financial decision-making and behavioral challenges. Regular workshops, seminars, and access to expert guidance can foster continuous learning and improved investment behaviour.

**Integration of Behavioral Finance in Professional Development:** Incorporating behavioural finance concepts into professional development programs can equip employees with practical tools to identify and mitigate cognitive and emotional biases, leading to more rational and informed investment choices.

## **Conclusion**

In conclusion, the study highlights the significant role of behavioral factors in shaping investment decisions among employees in Pune. The findings reveal that employees are influenced by emotional biases, concerns about job security, and occasional overconfidence in market predictions, despite demonstrating moderate risk tolerance and relative independence from cultural influences. These insights emphasize the need for integrating behavioral finance principles into workplace financial education and professional training programs. By enhancing risk awareness, encouraging long-term investment planning, and addressing emotional and cognitive biases, employees can be better equipped to make informed and resilient investment decisions. This focused approach can contribute to improved financial well-being and a more informed investor base within the working population of the region. The study exhibits that psychological biases explain an important portion of investment decision-making variance. Mitigation strategies such as investor education, decision aids, and behavioural nudges are essential to improve outcomes.

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