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Behavioral Biases in Investment Decision-Making: A Study of Sagar, M.P.

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Abstract
Investment decisions are shaped by a blend of rational analysis and psychological biases, a concept central to behavioral finance. This study examines how these biases impact individual investors in Sagar, M.P. Through a comprehensive survey, it identifies key biases such as anchoring, availability bias, cognitive dissonance, conservatism bias, herding, overconfidence, regret aversion, representativeness The research highlights how these biases influence financial decisions and often lead to less effective investment strategies. By understanding these psychological factors, the study aims to provide actionable recommendations for minimizing their negative impact. The goal is to help investors make more informed decisions, thereby improving overall investment outcomes.

Keywords: Behavioral Biases, Behavioral Finance, Cognitive Biases, Conservatism, Disposition Effect, Equity, Herding, Overconfidence, Risk Perception

1. Introduction

Investment decision-making is a complex process influenced not only by financial data and market conditions but also by the psychological and emotional biases of individual investors. Behavioral finance, a growing field of study, explores how these biases impact investment choices, often leading to decisions that deviate from rational economic theories. In recent years, there has been increasing interest in understanding how behavioral biases—such as overconfidence, loss aversion, herd mentality, and mental accounting—affect investors' financial behavior. These biases can lead to sub optimal investment outcomes, particularly in regions with less financial literacy and market exposure.

This study focuses on Sagar, a city in the state of Madhya Pradesh, India, to examine how individual investors in this region are influenced by behavioral biases. By analyzing investment patterns and decision-making processes, the research aims to shed light on the role of psychological factors in shaping financial decisions. Understanding these biases is critical for developing strategies to mitigate their negative effects and promote more rational and informed investment behavior. The findings from this study are expected to contribute to the broader field of behavioral finance, with implications for financial advisors, policy-makers, and individual investors.

2. Literature Review

Fooeik, A. M. L. et. al (2024) examines 41 studies on how regret bias affects portfolio optimization. It categorizes models into precise and simplified versions, looks at various limitations, and emphasizes the

increasing influence of regret in investment strategies. The review provides valuable insights into recent developments and future directions.

Almansour, B. Y. et. al (2023) examines the impact of behavioral finance factors on investment decisions in the Saudi equity market, mediated by risk perception. Herding, disposition effect, and blue-chip bias positively influence risk perception, while overconfidence affects investment decisions directly. Risk perception significantly impacts decisionmaking, highlighting the need to consider behavioral biases.

Mittal, S.K. (2022) develops a theoretical framework by reviewing literature on behavioral finance biases and their impact on investment decisions over the past five decades. Using a comprehensive literature review, the study identifies key biases and gaps, particularly in developing economies. It highlights the need to explore the role of behavioral biases in individual investment decisions in India, offering valuable insights for future research.

Upadhyay and Shah (2019), explored how behavioral biases, including overconfidence, perception, representativeness, anchoring, cognitive dissonance, regret aversion, narrow framing, and mental accounting, impact individual investors' decision-making in the stock market. Using a sample of 181 investors from Ahmedabad, they found that investors are not always rational, and these biases can significantly influence their investment choices.

Rawal and Choudhury (2018), researched the impact of demographics on the trading behavior of retail investors in the Faridabad district of India. Their study aimed to evaluate the relationship between psychographics and trading patterns. Data were collected from 300 retail investors using a structured questionnaire based on a Likert scale and convenience sampling. The researchers employed cross-tabulation and Chisquare techniques to analyze the data, revealing significant associations between demographic factors such as age, gender, and annual income with retail investors' trading behavior.

Kanta (2018), conducted a study on behavioral finance to understand investor behavior toward equity market investments among individuals in Delhi. Utilizing a random sampling technique, the research included 61 respondents. Various statistical tools, including engaging statistics, t-tests, correlation analysis, and percentage analysis, were employed to analyze the data. The findings indicated that construction representatives in Mysuru are aware of potential investment outcomes and revealed a significant relationship between behavioral finance and investment preferences among construction company representatives.

Gill and Bajwa (2018), conducted a study focusing on behavioral finance, behavioral biases, and their impact on investment decisions. The researchers reviewed various studies to gain a comprehensive understanding of behavioral finance and its significance in the decision-making process for investors. Their findings highlighted that behavioral finance plays a crucial role in investors' decision-making, with behavioral biases significantly influencing these choices. This research emphasizes the importance of raising awareness about behavioral biases to assist investors in making more informed decisions.

Umer and Kashif (2018), conducted a study titled "An Empirical Investigation of Investor's Behavioral Biases on Financial Decision Making." They gathered data through a selfcreated questionnaire from 250 respondents at the Pakistan Stock Exchange. Using multiple regression analysis, the study assessed the influence of five behavioral biases on investment decisions. The findings indicated that overconfidence and hindsight biases significantly impact investment decision-making, with t-values of 3.858 and 2.560, respectively, while other biases showed no significant effect.

S.Devi and Karthikeyan (2018), conducted a study titled "Investors' Perception Towards Behavioral

Finance in Investment Decision Making." This research examined five key factors—Market Dynamics, Logical Analysis, Herding Bias, Regret Aversion, and Heuristic Bias—that influence investors' decision-making processes. The data was analyzed using factor analysis. The study emphasizes the importance of recognizing these biases and finding effective solutions to mitigate their impact on investment decisions.

Verma (2016), explored various behavioral biases and their effects on financial decision-making, as well as strategies to mitigate these biases. The study identified confirmation bias, overconfidence bias, representativeness, the disposition effect, and familiarity bias as significant factors influencing decision-making. The primary goal of behavioral finance, as highlighted in this research, is to minimize or eliminate these biases, enabling investors to make more informed and rational investment choices.

Lall (2016), examined the evolution of behavioral finance and the factors influencing investor preferences. The study highlights that individuals do not always act rationally; at times, they make decisions based on the actions of others. Key factors affecting investor preferences include the safety of principal, risk tolerance, and herding behavior.

Kafayat (2016), aimed to identify various behavioral biases and their impact on investment decision-making. The study found that biases such as self-attribution, overconfidence, and over-optimism are interconnected. If an investor experiences one bias, there is a greater likelihood that they will also be affected by another bias.

Uprety and Ansari (2016), explored how demographic factors, particularly age and income, influence investor behavior in Indore's capital market. Their findings indicate that investors tend to favor short-term investments for capital appreciation, revealing a significant relationship between both age and income and their investment decisions.

Madaan (2016), "Behavioral Biases in Financial Decision Making," aiming to identify the behavioral factors that influence individual investors' decisions. The study gathered insights from various articles and books on behavioral finance and investment strategies, reviewing several biases, including mental accounting, overconfidence, overreaction, underreaction, and representativeness, all of which significantly impact investors' financial decision-making processes.

Shabarisha.N (2015), conducted a study on heuristics and biases related to financial investments, emphasizing the role of behavioral finance in investment decisions. Using a survey method with simple random sampling, data was collected from 30 respondents, categorized into experienced and young investors. The analysis involved calculating mean, mode, median, standard deviation, and coefficient of variation. The study examined the impact of nine behavioral biases—representativeness, overconfidence, anchoring, gambler's fallacy, availability, loss aversion, regret aversion, mental accounting, and self-control—on investors' decision-making processes.

Bisen and Pandey (2013), explored the applicability of behavioral finance theories among Indian investors in Lucknow. Data were collected through a self-designed questionnaire from 195 respondents, and chi-square tests were used for analysis. The findings indicated that investors are significantly influenced by the past performance of stocks, highlighting the relevance of the anchoring theory in the context of Indian investors.

Choudhary (2013), aimed to examine the significance and application of behavioral finance in investment decisions. The study identified several causes influencing behavioral finance, including anchoring, overconfidence, herd behavior, overreaction and underreaction, and loss aversion.

Rekik and Boujelbene (2013), aimed to demonstrate irrational financial behavior and highlight the ps-

ychological biases affecting the trading behavior of individual investors in Tunisia. Their findings revealed that biases such as herding, representativeness, anchoring, loss aversion, and mental accounting significantly influence investment decisions. Additionally, demographic factors like age, gender, and experience were found to also impact investor decisions.

3. Research Objectives

The primary objectives of this study are to:

1. To identify which is the most pronounced biases among investors.
2. Analyze the impact of biases on investment decision-making.
3. Suggest strategies to mitigate the negative effects of these biases on investment performance.

4. Research Methodology

Research Design: This study employs a quantitative research design, using a structured questionnaire to collect data from individual investors in Sagar. The survey is designed to assess the presence of various behavioral biases and their impact on investment decisions.

Sample Size: A purposive sample of 151 individual investors, actively engaged in investment activities, was selected.

Data Collection: Data was collected through a questionnaire distributed to investors in Sagar. The questionnaire included sections on demographic information, questions designed to detect the presence of behavioral biases such as Anchoring, Availability bias, Cognitive Dissonance, Conservatism Bias, Herding, Overconfidence, Regret Aversion, Representativeness

Data Analysis: The data was analyzed using statistical tools such as frequency distribution, Percentage.

5. Analysis And Data Interpretation

The sample consisted of investors from diverse age groups, educational backgrounds, and income levels. The majority of respondents were between 25 and 50 years of age, with a balanced representation of both genders. Table I below presents the frequency and percentage distribution of various behavioral biases affecting investment decisions, based on responses from 151 participants.

Table 1: Frequency of Biases Affecting Investment Decisions

Biases	Frequency	Percent
Anchoring	23	15.2
Availability Bias	11	7.3
Cognitive Dissonance	17	11.3
Conservatism Bias	43	28.5
Herding	8	5.3
Overconfidence	11	7.3
Regret Aversion	14	9.3
Representativeness	23	15.2
Total	151	100.0

The Table 1 shows the frequency and percentage of various behavioral biases that influence investment decisions, based on data from 151 respondents. Here's the interpretation of the data:

A. Conservatism Bias (28.5%)

Most prevalent bias: Conservatism bias is the most frequent bias, affecting 43 out of 151 respondents (28.5%). This suggests that a significant portion of investors may be slow to change their views or strategies, even when new information becomes available, which can affect their investment decisions.

B. Anchoring and Representativeness (15.2% each)

Second most common biases: Both anchoring and representativeness biases are reported by 23 respondents (15.2% each). Investors tend to rely heavily on initial information (anchoring) or assume that past patterns will repeat in the future (representativeness), which can lead to suboptimal decision-making.

C. Cognitive Dissonance (11.3%)

Moderately common: 17 respondents (11.3%) experience cognitive dissonance, where they justify previous investment decisions despite contradictory new information. This could lead to holding onto poor investments.

D. Regret Aversion (9.3%)

Relatively frequent: 14 respondents (9.3%) exhibit regret aversion, fearing that they might regret selling investments, which may cause them to hold onto losing investments or avoid selling profitable ones at the right time.

E. Availability Bias and Overconfidence (7.3% each)

Less common: Availability bias and overconfidence affect 11 respondents each (7.3%). Investors with availability bias focus on easily recalled information, while overconfident investors overestimate their abilities, leading to risky investments.

F. Herding (5.3%)

Least common: Only 8 respondents (5.3%) admit to herding behavior, where they follow the crowd when making investment decisions. Though less common, this behavior can lead to bubbles or market crashes.

Conservatism bias is the most prominent bias, indicating that many investors prefer to stick with their initial strategies despite new information. Anchoring and representativeness are also frequent, which suggests that many investors rely heavily on initial data or patterns. Herding behavior is the least common, indicating a relatively low tendency to follow the crowd.

6. Results And Discussion

1. **Prevalence of Behavioral Biases:** Behavioral biases are prevalent among individual investors, shaping their decisionmaking processes and often leading to sub-optimal financial outcomes. These biases arise from emotional, psychological, and cognitive factors that affect how investors perceive information and make choices.
2. **Impact on Investment Decisions:** Behavioral biases significantly influenced investment decisions. Overconfident investors tended to take on higher risks, often leading to poor financial outcomes. Loss aversion led to an overly conservative approach, with many investors missing out on potentially profitable opportunities. Herd behavior resulted in speculative investments, particularly during market highs, leading to significant losses during downturns. Behavioral biases affect almost all investors, driving decisions based on emotions like fear and greed, especially during market ups and

downs. With constant news and data, people often make quick, irrational choices. Retail investors are more prone to these biases, which can lead to market bubbles and crashes.

3. Strategies to mitigate the negative effects:

The strategies to mitigate the negative effects of the mentioned biases on investment performance are as follows:

a. Conservatism Bias: Regularly update your investment decisions based on new, reliable data and consult multiple credible sources.
b. Anchoring: Avoid relying on initial data; instead, reevaluate investments periodically with a focus on current trends and clear financial goals.
c. Cognitive Dissonance: Admit mistakes and track decisions. Seek validation from advisors or peers to prevent sticking with bad investments.
d. Regret Aversion: Diversify and set predefined exit strategies to reduce emotional decision-making and the fear of regret.
e. Availability Bias: Focus on long-term trends, use diverse information sources, and be skeptical of short-term influences.
f. Herding: Develop a personal investment plan, conduct independent analysis, and critically assess market trends before following the crowd.
g. Overconfidence: Stay humble, set realistic expectations, and use a structured decision-making process, relying on expert advice.
h. Representativeness: Avoid assuming past patterns will repeat; instead, diversify and consult professional insights for broader perspectives.

7. Conclusions

This study highlights the strong presence of behavioral biases among individual investors in Sagar, M.P. Overconfidence, loss aversion, herd behavior, and mental accounting were the most common biases affecting decision-making. These biases often led to suboptimal investment choices, such as excessive trading, holding onto losing investments, and following market trends without proper analysis. Investors can improve decision-making by enhancing financial literacy, seeking professional advice, and becoming aware of common behavioral biases. Additionally, portfolio diversification helps mitigate risks from overconfidence and herd behavior.

Future research could expand the study to other regions in Madhya Pradesh or India to compare the prevalence of behavioral biases across different populations. Additionally, qualitative research could provide deeper insights into the reasons behind certain biases and how they develop over time.

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