

An Impact of Behavioral Bias on Investment Decision Making of Individual Investors

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ABSTRACT- Behavioral finance has gained increasing prominence in understanding the role of psychological factors in shaping investment decisions. This study aims to investigate the impact of various behavioral biases on the investment decision-making process of individual investors. Specifically, it examines the prevalence and influence of biases such as confirmation bias, loss aversion, herding behavior, overconfidence, and regret aversion among individual investors.

The study employs a quantitative approach, collecting data through a structured questionnaire from a sample of 201 individual investors. Descriptive statistics, correlation analyses, chi-square tests, and reliability measures are utilized to analyze the data and assess the relationships between behavioral biases, demographic factors, investment characteristics, and investment decisions.

The findings reveal that behavioral biases are prevalent among the respondents, with varying degrees of influence on their investment decisions. Significant associations are observed between certain biases and factors such as annual income, percentage of investment from savings, frequency of investments, and investment types. For instance, individuals with higher incomes exhibit slightly more loss aversion tendencies, while those investing a higher percentage of their savings tend to demonstrate greater confirmation bias.

The study contributes to the understanding of behavioral finance by providing empirical evidence on the impact of various biases on individual investors' decision-making processes. It highlights the importance of recognizing and mitigating these biases to promote more informed and rational investment decisions. The findings have implications for individual investors, financial advisors, and policymakers in developing strategies to enhance investment decision-making and overall financial well-being.

KEYWORDS: Behavioral finance, individual investors, investment decision-making, behavioral biases, confirmation bias, loss aversion, herding behavior, overconfidence, regret aversion.

I. INTRODUCTION

One of the most prominent biases observed among individual investors is overconfidence, where they tend to overestimate their ability to predict market movements and make successful trades. This bias can lead to excessive trading, leading to higher transaction costs and potential

underperformance. Another notable bias is loss aversion, in which investors are more motivated to avoid losses than to gain equivalent gains, leading to an aversion to realizing losses and a tendency to hold losing positions too long. Herding is another notable bias where individuals are. to imitate the investment decisions of others out of a desire to adaptor faith in the collective good of the crowd. to wisdom It can contribute to market bubbles and crashes and maintain an optimal investment strategy. In addition, anchoring bias causes investors to rely heavily on past prices or arbitrary values as benchmarks, and they fail to adjust their judgments sufficiently when new information emerges. The impact of these behavioral biases on individual investors can be profound. Suboptimal asset allocation, insufficient diversification and impulsive trading decisions can reduce portfolio performance and harm long-term financial goals. In addition, emotional decision making during times of market volatility can exacerbate losses and prevent effective risk management. Understanding the impact of behavioral biases on investment decisions is critical for individual investors, financial advisors and policy makers. By recognizing these biases, individual investors can mitigate their impact by increasing self-awareness, adopting disciplined investment strategies and committing to continuous learning. Financial advisors can incorporate behavioral finance principles in their interactions with clients and provide guidance and tailored solutions to combat bias. On the other hand, policymakers can develop regulatory frameworks and educational initiatives to promote financial literacy and promote rational decision-making among individual investors..

II. SCOPE OF THE STUDY

The purpose of the study is to investigate the impact of behavioural biases on the choices of individual investors residing at Chennai in making investment decision. Common biases like herding behaviour, loss aversion, and overconfidence will be examined in this study along with their effects on investment performance. The study also deals with methods to lessen these biases and improve the ability of investors to make decisions.

III. RESEARCH OBJECTIVE

- To know about socio economic profile of individual investors and their investment decision making behaviour.
- To study the relationship between the behavioral bias and the decision making of the investors
- To provide suggestions to mitigate behavioral biases among individual investors.

IV. RESEARCH METHODOLOGY

This study involves the impact of behavioral biases on the investment decisions of individual investors residing in Chennai district who were selected based on convenience sampling method. The primary data were collected by administering a questionnaire consisting of different biases namely, overconfidence, regretting bias, herding behaviour, loss-aversion and confirmation bias. A sample size of 201 respondents were selected and the responses were collected to analyse their investment decision behaviour. The data collected were analysed using chi-square and correlation to study the relationship between the behavioral biases and investment decision making.

V. LITERATURE REVIEW

Vaishnavi Seth & Sharad Kumar [1] determine the cognitive biases and the emotional biases that affect investor decisions and to understand if there is any relationship between behavioral biases and investment decisions. This research problem employed the use of partly Descriptive and partly Conclusive/ Causal.

Tahir Imran Gulzar, Dr. Najabat Ali [2] study focuses on examining the impact of six behavioral biases (availability bias, self-control bias, overconfidence bias, illusion of control bias, and representative bias) on investment decisions. The findings of the study indicate that the variables under investigation explain 37.53% of the overall variance, suggesting that there are no significant issues with the chosen methodology.

R. Jain et al. [3] focuses on six specific behavioral biases, namely overconfidence bias, disposition effect, herd mentality, loss aversion bias, recency bias, and choice paralysis. The collected data was then analyzed using statistical software packages such as SmartPLS 2.0 and IBM SPSS 20.

Vijaya A. Tupe et al. [4] evaluate the impact of behavioral factors on a top Investment Avenue which investment decision made by investors in Aurangabad city. In this research study, questionnaires, personal meetings, observations, and Interviews are used as primary data collection methods, and deliberate random sampling is used. Ms. Aparna Shukla [5] study to provide a theoretical background of how Behavioural Finance came into existence. To identify the behavioral biases and explore their implications on investment decision-making. This paper is conceptual and descriptive.

Bakir Illahi Dar et al. [6] investigate the determinants that shape the investment decisions of individual investors in the region of Jammu and Kashmir (J&K). The study employed various statistical techniques, including t-test, ANOVA, and logistic regression, to assess the impact of demographic factors and behavioral determinants on investment behavior.

Ica Rika Candraningrat et al. [7] aimed to analyze the bias of investor behavior in making investment decisions on the Indonesian stock exchange the study used a descriptive quantitative research method with a survey. It utilized multiple regressions to test hypotheses at a significance level of 0.05. Investors experienced behavioral biases due to disposition and overconfidence effects.

Mushtaq Ahmad Shah et al. [8] study revealed that these heuristic factors significantly predicted investors' heuristic behaviors and had a notable impact on their investment decisions and performance. Various statistical techniques such as descriptive statistics, factor analysis, and structural equation modeling to analyze the data.

Dr. Anjali Bhatnagar et al. [9] presents a summary of a survey conducted to examine the behavioral biases that impact the investment decisions of individual investors. The findings revealed that the most influential biases on investment decisions were overconfidence bias, loss aversion bias, and familiarity bias.

Muhadjir Anwar et al. [10] investigate the impact of loss aversion and mental accounting on investment decisions, while also considering the moderating role of self-control.

M. I. Dhole et al. [11] determined which algorithm yielded the highest accuracy in categorizing texts into predefined topics or classes. The study's findings revealed that SVM outperformed the other algorithms, exhibiting the highest accuracy rate of 85%.

A. Chadha et al. [12] investigates the impact of heuristic behavior on investment decision-making in the Indonesian capital market, both in the long-term and short-term, amidst the COVID-19 pandemic.

G. Madaan [13] enhanced comprehension regarding the impact of heuristics on the perceived investment performance and financial satisfaction of individual investors in India.

B. I. Dar et al. [14] explores the phenomenon of investors making rational errors during the investment decision-making process due to cognitive and emotional biases, leading to unfavorable investment choices.

VI. DATA ANALYSIS AND INTERPRETATION

A. Reliability Test

Reliability analysis (Cronbach's alpha) was performed to examine the construct internal consistency. SPSS was used to assess the reliability. Cronbach's alpha value for the study is 0.802 which is higher than 0.70, it indicates that the data was highly reliable and internally consistent.

Table 1: Demographic Profile of the Respondents

Factors	Category	No.of.Respondents	Percentage
Experience	Below 1 year	86	24.4
	1-2 years	110	31.2
	3-4 years	126	35.7
	Above 5 years	31	8.8
Frequency of investment	Monthly	60	17
	Quarterly	77	21.8
	Semi annually	119	33.7

	Annually	97	27.5
Type of Investments	Shares	77	21.8
	Debentures and bonds	84	23.8
	Mutual funds	122	34.6
	Specify	70	19.8
Income	Less than Rs 30,000	62	17.6
	Rs 30,001-60,000	71	20.1
	Rs 60,001-90,000	156	44.2
	More than Rs 90,000	64	18.1
Age	18-22 years	89	25.2
	23-27 years	141	39.9
	28-32 years	55	15.6
	33 years and above	68	19.3

(Source: Primary data)

The majority of respondents (35.7%) have 3-4 years of experience, followed by 1-2 years (31.2%), below 1 year (24.4%), and above 5 years (8.8%). The most common investment frequency is semi-annually (33.7%), followed by annually (27.5%), quarterly (21.8%), and monthly (17%). The most popular investment type is mutual funds (34.6%), followed by debentures and bonds (23.8%), shares (21.8%), and other specified investments (19.8%). The largest group of respondents (44.2%) have an income between Rs 60,001-90,000, followed by Rs 30,001-60,000 (20.1%), more than Rs 90,000 (18.1%), and less than Rs 30,000 (17.6%). The majority of respondents (39.9%) are in the 23-27 years age group, followed by 18-22 years (25.2%), 33 years and above (19.3%), and 28-32 years (15.6%).

B. Correlation Analysis

Table 2: Year of Experience in Investment and Loss Aversion

	Value	Approx. Sig.
Pearson's R	0.193	.006 ^c
N of Valid Cases	201	

(Source: Primary data)

Based on the above table 2, the responses towards the investment made and herd behaviour shows the correlation value as 0.193. The significance value is 0.006 which is lesser than 0.05. Hence there is a significant relationship between year of experience in investment and loss aversion.

Table 3: Investments Made and Herd Behaviour

	Value	Approx. Sig.
Pearson's R	0.112	.114 ^c
N of Valid Cases	201	

(Source: Primary data)

Based on the above table 3, the responses towards the investment made and herd behaviour shows the correlation value as 0.112. The significance value is 0.114 which is greater than 0.05. Hence there is no significant relationship between investments made and herd behaviour.

Table 4: Annual Income and Loss Aversion

	Value	Approx. Sig.
Pearson's R	0.107	.130 ^c
N of Valid Cases	201	

(Source: Primary data)

Based on the above table 4, the responses towards the loss aversion across different annual income levels shows the correlation value as 0.107. The significance value is 0.130 which is greater than 0.05. Hence there is no significant relationship between annual income levels and loss aversion

Table 5: Year of Experience in Investment and Overconfidence Bias

	Value	Approx. Sig.
Pearson's R	-0.092	.193 ^c
N of Valid Cases	201	

(Source: Primary data)

Based on the above table 5, the responses towards the year of experience in investment and overconfidence bias shows the correlation value as -0.092. The significance value is 0.193 which is greater than 0.05. Hence there is no significant relationship between experience in investment and overconfidence bias

Table 6: Percentage of Investment and Confirmation Bias

	Value	Approx. Sig.
Pearson's R	0.134	.057 ^c
N of Valid Cases	201	

(Source: Primary data)

Based on the above table 6, the responses towards the percentage of investment and confirmation bias show the correlation value as 0.134. The significance value is 0.057 which is greater than 0.05. Hence there is no significant relationship between percentage of investment and confirmation bias.

C. Chi-Square Analysis

Table 7: Frequency of Investment and Generating Above Average Return

	Value	Asymp. Sig. (2-sided)
Pearson Chi-Square	28.230 ^a	0.005

(Source: Primary data)

Based on the above table 7, the responses towards the frequency of investment and generating above average return shows the chi-square value as 28.230. The significance value is 0.005 which is lesser than 0.05. Hence there is a significant association between frequency of investment and generating above average return.

Table 8: Age and Year Of Experience In Investment

	Value	Asymp. Sig. (2-sided)
Pearson Chi-Square	72.374 ^a	0.000

(Source: Primary data)

Based on the above table 8, the responses towards the age bracket and year of experience in investment shows the chi-square value as 72.374. The significance value is 0 which is lesser than 0.05. Hence there is a significant association between age bracket and year of experience in investment.

Table 9: Frequency of Investment and Skills Matter More

	Value	Asymp. Sig. (2-sided)
Pearson Chi-Square	16.175 ^a	0.183

(Source: Primary data)

Based on the above table, the responses towards the frequency of investment and skills matter more shows the chi-square value as 16.175. The significance value is 0.183 which is greater than 0.05. Hence there is no significant association between frequency of investment and skills matter more.

Table 10: High Level of Education and Seeing Speculative Stocks Trending Online

	Value	Asymp. Sig. (2-sided)
Pearson Chi-Square	13.705 ^a	0.320

(Source: Primary data)

Based on the above table 10, the responses towards the high level of education and seeing speculative stocks trending online shows the chi-square value as 13.705. The significance value is 0.320 which is greater than 0.05. Hence there is no significant association between high level of education and seeing speculative stocks trending online.

VI. FINDING

Based on the analysis of the data and tables provided, here is a possible conclusion for the topic "Impact of behavioural biases on investment decision-making of individual investors": The study investigated the prevalence and impact of various behavioural biases on the investment decision-making process of individual investors. The findings reveal that behavioural biases, such as confirmation bias, loss aversion, herding behaviour, overconfidence, and regret aversion, are indeed present among the respondents to varying degrees. The correlation and chi-square analyses indicate statistically significant associations between certain demographic factors, investment characteristics, and the exhibition of specific behavioural biases. For instance, individuals with higher annual incomes tend to exhibit slightly more loss aversion tendencies, while those investing a higher percentage of their savings demonstrate a greater propensity for confirmation bias.

VII. CONCLUSION:

Behavioral biases have a substantial and diverse influence on individual investors' investment decision-making. The several biases that might result in worse than ideal investing outcomes, such as herding behavior, loss aversion, and overconfidence, have been clarified by this study. Investors, regulators, and politicians can improve the rationality of investment decisions by being aware of these biases and their effects. The recommendations call for putting in place awareness-raising initiatives, seeking advice from a financial advisor, utilizing technology such as robo-advisors to diversify a portfolio and reduce risk, and regularly assessing investment choices. By adopting these actions, investors can mitigate the impact of biases like overconfidence and loss aversion, which will enhance their investing results by rationalizing their decision-making processes.

CONFLICTS OF INTEREST

The authors declare that they have no conflicts of interest.

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