**Influence of Overconfidence, Loss Aversion, and Anchoring on Investment Decision Making**

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**Abstract**

Investment decisions are affected by more than mere logic. Although conventional financial theories posit that investors behave rationally, behavioral finance emphasizes the impact of cognitive biases on investment decisions. This study delves into three primary cognitive biases: overconfidence, loss aversion, and anchoring bias, and their effects on investment decisions. Overconfidence causes investors to inflate their perception of their knowledge. Loss aversion leads investors to be excessively cautious, favoring the avoidance of losses over the pursuit of potential gains. Anchoring bias leads to an excessive dependence on previous prices rather than adjusting to new information. Recognizing these biases is essential for enhancing investment decisions. Existing research typically examines these biases in isolation, missing their synergistic effects. There is limited exploration of how these biases interact with variables such as age, income, and investment experience, particularly in the Indian context. Moreover, there is a research gap concerning how these biases develop over time and influence long-term investment behaviors. This study investigates the effect of these biases on investment decisions among individual investors in Bengaluru. Data was gathered from 150 investors through surveys and analyzed with SPSS software, utilizing statistical methods such as frequency distribution, and regression analysis. Regression analysis shows that overconfidence is the most significant factor affecting investment decisions, while anchoring bias plays a minor role, and loss aversion is insignificant. These results underscore the necessity for strategies aimed at managing overconfidence to encourage more rational investment choices.

**Keywords**: Cognitive Bias, Influence, Investment Decision Making, Risk Assessment.

**Introduction**

Cognitive biases greatly influence the decision-making process in investments, often causing investors to make unwise choices. This research investigates the effects of overconfidence, loss aversion, and anchoring on investment decisions. Investors who are overconfident tend to misjudge their knowledge and engage in high-risk behavior, while loss aversion results in excessive caution, leading them to steer clear of potential losses, even if it means missing out on opportunities. Anchoring causes investors to heavily depend on initial reference points, which can cloud their assessment of stock prices and market dynamics. Recognizing these biases is essential for encouraging rational investment approaches, enabling investors to make more informed and balanced financial choices.

**Review Of Literature**

**Lorenzo Marrese and Lorenzo Esposito (2021)** conducted a study focused on cognitive biases, specifically overconfidence and risk aversion, and examined how cognitive skills, financial knowledge, and individual characteristics influence investment choices. This analysis of biases and their impact on financial decision-making incorporates a Cognitive Reflection Test. The research explores whether enhanced cognitive skills can diminish the effects of these biases. The paper presents potential policy interventions and emphasizes the significance of financial education in tackling monetary policy and cognitive biases related to finance.

**Sonia Riyat and Chanchal Mandal (2021)** seek to deepen the understanding of the cognitive factors that influence investor behavior by identifying critical themes, trends, and gaps in research through a descriptive analysis centred on cognitive biases and investment decisions. The goals of the study include recognizing common errors made by average investors in their key investment decisions and suggesting corrective actions. It aims to aid investors in effectively assessing the available information to make well-informed investment choices.

**Erik Syawal Alghifari and Yofy Syarkani (2021)** examine the impact of cognitive biases on investor behavior. To uncover more about how these biases affect investment decisions, they utilize Partial Least Squares-Structural Equation Modelling to investigate factors such as age, gender, and education. The results reveal that the illusion of control bias affects investor decisions, with gender and education also having significant influences. Moreover, overconfidence bias is shown to affect how investors make choices, with age being another important factor.

**Laxmi Kanta Sharma, Bharat Ram Dhungana et al. (2022)** examine the impact of cognitive biases on investment decisions in Pokhara Valley, Nepal in this research. The study employs regression analysis, ANOVA tests, and bivariate Pearson correlation to evaluate how availability, anchoring, overconfidence, herd behavior, and regret aversion influence rational decision-making. The findings indicate that cognitive factors such as regret aversion, herd behavior, overconfidence, availability, and anchoring significantly affect investment decisions. While regret aversion and anchoring biases do not positively influence irrationality, the overconfidence bias does.

**Satish K. Mittal (2022)** This research not only evaluates existing literature on behavioral finance biases but also provides a theoretical framework for identifying cognitive biases in investment decision-making and presents insights into investor behavior. By employing a comprehensive literature review methodology, the study analyses various factors, such as publication year, journal, country, type of research, type of data, statistical methods, and biases that require further exploration. This literature review underscores the research gap within behavioral finance and highlights the importance of understanding behavioral biases when making investment decisions, particularly in developing countries like India.

**Anshita Bihari and Anil Kumar (2022)** This research investigates the connections and trends between cognitive bias and investment choices in the literature spanning from 2007 to 2022. It identifies major contributions, citations, publications, and the countries associated with these findings. The study provides a roadmap for future inquiries into cognitive biases and investment decisions as well as insights into the intellectual framework and biases of investors. Future research may consider additional databases.

**Antony Anu (2022)** This research explores how demographic characteristics and cognitive biases influence investment decisions through exploratory factor analysis. The primary objective is to understand how biases affect risk tolerance and to identify the key biases influencing investments, thereby assisting investors, financial advisors, and policymakers in making more informed decisions.

**Yuyang Wang (2023)** examines cognitive biases like loss aversion, the endowment effect, the framing effect, and overconfidence concerning investment decisions. By employing SEM analysis, the research seeks to identify methods to lessen these biases and improve investment results. The results indicate that investors should acknowledge and actively combat cognitive biases to boost their performance and overall contentment.

**Dr. Archanna H. and Manjunath Awalakki (2023)** investigate overconfidence in investing, concentrating on both its emotional and cognitive aspects. The study utilizes portfolio analysis to reveal the fundamental mechanisms and evaluate the effects of these biases on investment choices. Its objective is to understand how overconfidence influences investment behavior and to offer strategies to mitigate its effects. Ultimately, this research aims to enhance the comprehension of human behavior in financial situations, allowing investors, financial advisors, and policymakers to make better-informed decisions.

**A. Pushpa and Roger Norabuena, et al. (2023)** conducted a study that examines how women's views on risk and investment preferences are influenced by cognitive biases, specifically mental accounting and anchoring. The research explores the impact of these biases on risk perception and investment decisions, ultimately influencing women's investment choices, utilizing SPSS and SEM for analysis. The findings suggest that risk perception is positively influenced by both anchoring and cognitive assessment, which in turn positively affects their investment decisions.

**Statement of Problem**

The process of making investment decisions is frequently swayed by psychological biases instead of grounded rational analysis. Key cognitive biases such as overconfidence, loss aversion, and anchoring can skew investors' perceptions of risk, leading to less than-ideal financial choices. Overconfidence can lead to taking on too much risk, while loss aversion can discourage investors from accepting losses, even when it means forgoing possible gains. Anchoring results in dependence on arbitrary benchmarks, which can influence market evaluations. Although there is increasing interest in behavioral finance, research remains sparse regarding how these biases affect individual investors, especially in Bengaluru. This study aims to explore these influences, offering insights to enhance investment decision-making.

**Objectives**

* To investigate the relationship between cognitive bias (overconfidence biases, loss aversion, and anchoring biases) on investment decisions

**Hypothesis**

**Relationship Between Cognitive Bias on Investment Decisions**

H0: Cognitive biases (overconfidence biases, loss aversion, and anchoring biases) not significantly influence investors' decision making.

H1: Cognitive biases (overconfidence biases, loss aversion, and anchoring biases) significantly influence investors' decision making.

**Scope of the Study**

This research explores the effect of cognitive biases such as overconfidence, loss aversion, and anchoring on the investment choices made by individual investors in Bengaluru. It aims to uncover how these biases influence financial decisions. The study focuses specifically on individual investors instead of institutional ones, offering insights into personal investment behaviors. Data was gathered from 150 participants, predominantly young and educated investors with limited experience. The research utilizes statistical methods, including regression analyses, to assess the influence of these biases. The results are significant for financial advisors, policymakers, and investors looking to enhance rational decision-making.

**Research Methodology**

The methodology for this research involves gathering primary data through questionnaires distributed to 150 individual investors in Bengaluru. Secondary data is obtained from various books, journal articles, and online resources to provide context. A stratified probability sampling technique is employed to ensure representation of diverse investors across different financial markets. The research tool consists of a structured questionnaire that includes demographic information and a 5-point Likert scale to evaluate cognitive biases. This approach facilitates the examination of how cognitive biases affect investment decisions. The research utilizes analytical techniques that include correlation and regression.

**Analysis And Interpretations**

**Table 1: Table Showing the Frequency Distribution Analysis of Demographic Information.**

|  |  |  |  |
| --- | --- | --- | --- |
| **Sl No** | **Demographical Variables** | **Frequency** | **Percentage** |
| **1** | **Gender** |  |  |
| Male | 92 | 61.3 |
| Female | 58 | 38.7 |
| **Total** | **150** | **100.0** |
| **2** | **Age** |  |  |
| 18 Years - 25 Years | **86** | 57.3 |
| 26 Years - 35 Years | **41** | 27.3 |
| 36 Years - 45 Years | **16** | 10.7 |
| Above 45 Years | **7** | 4.7 |
| **Total** | **150** | 100.0 |
| **3** | **Education** |  |  |
| High School | 3 | 2.0 |
| Bachelor’s Degree | 76 | 50.7 |
| Master’s Degree | 67 | 44.7 |
| PhD | 4 | 2.7 |
| **Total** | **150** | **100** |
| **4** | **Occupation** |  |  |
| Student | 50 | 33.3 |
| Self Employed | 18 | 12.0 |
| Salaried Employee | 82 | 54.7 |
| **Total** | **150** | **100** |
| **5** | **Investment Experience** |  |  |
| Less than 1 Year | 80 | 53.3 |
| 1 – 3 Years | 36 | 24.0 |
| 3 – 6 Years | 29 | 19.3 |
| 6 Years & Above | 5 | 3.3 |
| **Total** | **150** | **100** |

The table above illustrates the frequency distribution of demographic data. It indicates that, in terms of gender, 61.3% of participants are male, while 38.7% are female. Regarding age, 57.3% of the respondents belong to the 18–25 years category, followed by 27.3% in the 26–35 years range and 10.7% in the 36–45 years group. Concerning education, the largest portion of respondents holds a Bachelor’s degree (50.7%), with those having a Master’s degree following closely at 44.7%. When it comes to occupation, salaried employees comprise the most significant group at 54.7%, while students account for 33.3%. In terms of investment experience, 53.3% of respondents have less than one year of experience, and 24% have 1–3 years of experience, indicating that a substantial number of investors are relatively new to the market.

**Table 2: Regression Test on Relationship Between Cognitive Bias (Overconfidence Biases, Loss Aversion, And Anchoring Biases) On Investment Decisions.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
| B | Std. Error | Beta |
| (Constant) | 1.270 | .369 |  | 3.440 | .001 |
| Overconfidence average | .488 | .071 | .501 | 6.909 | .000 |
| Loss aversion average | .016 | .087 | .014 | .183 | .855 |
| Anchoring bias average | .180 | .102 | .140 | 1.763 | .080 |

The regression analysis investigates the role of cognitive biases in shaping investment decisions. The constant value (1.270, p = .001) indicates the fundamental level of investment decisions in the absence of biases. Overconfidence bias has a notable positive effect (B = .488, p = .000), suggesting that increased overconfidence correlates with more robust investment decisions. Given that p < 0.05, we reject the null hypothesis concerning overconfidence. On the other hand, loss aversion (B = .016, p = .855) and anchoring bias (B = .180, p = .080) show no significant influence, as their p-values exceed 0.05. Therefore, we accept the null hypothesis for both loss aversion and anchoring bias. This indicates that overconfidence stands out as the most significant cognitive bias impacting investment decisions, whereas loss aversion and anchoring bias do not have a meaningful effect**.**

**Conclusion**

This research investigated the effects of cognitive biases such as overconfidence, loss aversion, and anchoring on individual investors' investment decision making in Bengaluru. Analysis of data from 150 participants indicated that the majority of investors were young, well-educated, and had minimal investment experience.

This research explored how overconfidence, loss aversion, and anchoring impact individual investors' investment decisions in Bengaluru. The study collected data from 150 participants, primarily consisting of young, educated, and novice investors, revealing that 61.3% were male and 57.3% were between the ages of 18 and 25. The regression analysis indicates that overconfidence has a significant effect on investment choices, resulting in more decisive investment actions. Conversely, loss aversion and anchoring bias do not demonstrate any significant influence, implying that these biases do not significantly alter investment behavior. The findings suggest that investors displaying overconfidence are more inclined to take daring financial risks, while those swayed by loss aversion or anchoring do not exhibit considerable differences. These results highlight the importance of managing overconfidence to foster sound investment practices, as it is the primary cognitive bias impacting decision-making. Future research should examine how cognitive biases change with varying levels of investment experience, the impact of financial literacy on reducing these biases, and the effects of external factors such as media and financial news on investor behavior. Moreover, additional studies could explore how emotional elements like fear, enthusiasm, and regret affect investment choices. By gaining insights into and addressing cognitive biases, investors can make more educated and rational financial decisions, leading to improved financial results and greater market efficiency.

**Limitations**

* The study is limited to investors within Bangalore city and the findings may not generalize to other regions.
* The data collection relies on self-reported responses, which may be subject to respondent bias.
* The study focuses on a limited set of cognitive biases and may not capture the full range of factors influencing decision-making.
* Time and resource constraints may limit the sample size and depth of analysis.

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