Managing Overconfidence Bias in Decision Making: A Review of the Literature

2 authors:

Vijaykumar Dhannur
Visvesvaraya Technological University

Shubham Kusane
Visvesvaraya Technological University

Education and Society **UGC CARE Listed Journal**
(शिक्षण आणि समाज) ISSN 2278-6864

Education and Society

Since 1977

The Quarterly dedicated to Education through Social Development
And Social Development through Education

April-June 2023
Year: 46, Issue-3/ Volume-II

Indian Institute of Education
J. P. Naik Path, Kothrud, Pune- 38

Indian Institute of Education

Founder of the Institute
Prof. J. P. Naik and Dr. Chitra Naik

Education and Society

Publisher:
Indian Institute of Education
J. P. Naik Path, Kothrud, Pune- 38

Contact Numbers: 8805159904, 9834109804
Web-site: www.iiepune.org
Email: educationandsociety1977@gmail.com, iiepune1948@gmail.com

---

Education and Society, the educational quarterly is owned, printed and published by the Indian Institute of Education, Pune. It is printed at Pratima Mudran, 1-B, Devgiri Istate, Survey No. 17/1-B, Plot no. 14, Kothrud Industrial Area, Kothrud, Pune 38. It is published by the Editor Dr. Jaysing Kalake at Indian Institute of Education J. P. Naik Path, Kothrud, Pune- 38. Opinions or views or statements and conclusions expressed in the articles that are published in this issue are personal of respective authors. The editor, editorial board and the institution will not be responsible for the same in any way.

Managing Overconfidence Bias in Decision Making: A Review of the Literature

Dr. Vijaykumar Dhannur
Assistant Professor,
Shubham Mohan Kusane
Research Scholar
Dept. of Management Studies, Visvesvaraya Technological University, Belagavi

---

Abstract:

Overconfidence bias is a well-documented phenomenon in the field of psychology and behavioral finance. It refers to the tendency of individuals to overestimate their abilities and the accuracy of their predictions. This bias can have a significant impact on decision-making, particularly in the context of risk-taking. The current prevailing research has shown that overconfidence bias can lead individuals to take on more risk than they should, leading to negative outcomes such as financial losses or physical harm. Overconfidence can also lead individuals to ignore or downplay potential risks, leading to poor decision-making. This behavior can lead to a positive feedback loop, where the overconfident investors' increased trading activity further reinforces their belief in their abilities, leading to even more aggressive trading. The literature on overconfidence bias highlights the importance of recognizing and managing this bias in decision-making, particularly in contexts where risk-taking is involved. Strategies such as seeking out diverse opinions and feedback, and taking a more objective approach to decision-making, can help individuals mitigate the negative impact of overconfidence bias.

Keywords: Overconfidence bias, Behavioral Finance, Stock Market, Decision Making and Cognitive Bias

---

Introduction:

Investment decisions refer to the choices made by individuals or organizations regarding the allocation of financial resources into various assets with the aim of generating a return on investment. These decisions can have a significant impact on an individual's financial future, as well as the success of a company. When making investment decisions, it is important to consider several factors such as the investor's financial goals, risk tolerance, and the current economic factors. Financial literacy is becoming increasingly important as governments are prioritizing financial education to enhance the well-being of the population. It involves a collection of competencies and comprehension required to make informed financial judgments (Corsini & Giannelli, 2021). Despite that there has always been irrationality among the investor courtesy behavioral bias (Baker et al., 2019), (Paisarn et al., 2021). Of the many biases that researchers work, one bias that has been very lucrative and spoken about is overconfidence. Overconfidence bias is a psychological tendency or cognitive bias in which an individual overestimates their abilities, knowledge, or performance in a particular area. This bias can have significant consequences in many areas of life, including decision-making, investment choices, and financial planning (Statman et al., 2006). In the context of decision-making, overconfidence bias can lead individuals to overestimate their ability to predict future outcomes or events. For example, an individual may feel overly confident in their ability to predict the outcome of a sporting event, political election, or stock market performance. This can lead to poor decision-making, such as making risky bets or investments based on incomplete or inaccurate information (Musah et al., 2023). Overconfidence bias can also impact investment choices and financial planning. Investors who exhibit overconfidence bias may believe that they have superior knowledge or insight into a particular company or industry, leading them to make investment decisions based on incomplete or inaccurate information. This can result in the investor taking on greater risk or investing in assets that may not align with their overall financial goals. Additionally, overconfidence bias can lead to the disposition effect, which is the tendency for investors to hold onto losing investments for too long and sell winning investments too quickly (Cueva et al., 2019). This can result in investors missing out on potential gains and experiencing greater losses over the long term (Tekçe & Yılmaz, 2015).

There are several factors that can contribute to overconfidence bias, including past successes, social norms, and exposure to media and advertising. For example, an individual who has experienced past successes may be more likely to exhibit overconfidence bias, as they may believe that they have a track record of making successful decisions. Additionally, exposure to media and advertising that promote the idea of "expert" knowledge or "winning" strategies can reinforce feelings of overconfidence (Zia et al., 2017). By giving more weight to their personal signals than the overall market consensus, traders who are overconfident can cause asset prices to deviate from their true values. This results in excessive volatility in the market as asset prices become distorted. It is important to note that such price distortions can lead to the formation of bubbles in asset prices (Scheinkman & Xiong, 2003). Traces of overconfidence biases have been all the segment of assets in the capital market like equity (Gupta et al., 2018), commodity (Yung & Liu, 2009), ETFs (Kunjal and Peerbhai 2021). The bias has its own influence on the risk preference and tolerance of investors. Overconfidence can lead individuals to take on risks that are beyond their actual capabilities. For example, an individual who is overconfident in their ability to invest in the stock market may take on more risky investments than they can handle, leading to losses. Also, overconfidence can lead individuals to ignore or downplay potential risks. This can lead to poor decision-making, as individuals may not take into account all the relevant information when assessing the risk of a particular action(Chen et al., 2017) (Trinugroho & Sembel, 2011). When investors are overconfident, they tend to link positive market returns with their own skills in selecting profitable securities. This can result in more aggressive trading behavior during periods of market gains. Consequently, when overconfidence is prevalent among investors, past market returns can have a positive impact on current trading activities (Gervais & Odean, 2001).

In Indian Context the traces of the bias have been studied and found among the investors in Bombay Stock Exchange (BSE), the analysis of returns impulse responses to private and public information shocks, it has been observed that returns tend to overreact to private information and underreact to public information. This means that the market tends to place more weight on information that is only available to a select few individuals, while not fully incorporating information that is publicly available to everyone. As a result, the market may be slower to adjust to new public information, leading to potential inefficiencies and market anomalies. This behavior can be attributed to factors such as information asymmetry and cognitive biases, which can lead to suboptimal decision-making (Mushinada & Veluri, 2018). The question is what boosts overconfidence among the investors? The answer to the above question can be simply attributed to two situations firstly, when investors make accurate forecasts of future returns, they tend to become overconfident and trade more frequently in the following periods. This behavior can be attributed to self-attribution bias, where investors attribute their successful forecast to their own skill or knowledge, leading them to believe that they can continue to achieve similar results. Conversely, when investors make incorrect forecasts, their overconfidence may decrease slightly, as they may recognize that their forecast was flawed. These findings highlight the importance of understanding the role of cognitive biases in investment decision-making, particularly in contexts where market gains may influence investor behavior. By recognizing and managing biases such as self-attribution bias, investors can make more informed and objective decisions that are not solely driven by overconfidence or emotions (Chuang & Lee, 2006).

While overconfidence bias can have negative consequences, there are several strategies that can help individuals mitigate its effects. One such strategy is to seek out diverse perspectives and opinions when making decisions. Many Fintech Companies have adopted newer technologies like automation, gamification etc. that assist investors to make informed decisions. Investors active participation in gamification can help reduce overconfidence bias and disposition effect. This suggests that these biases can be mitigated through increased engagement with gamified learning experiences (Şenol & Onay, 2023). Another experiment that was conducted based on the gamification model suggested that by using the gamified methods of learning, the results can enhance by at least 14.98% and helps in judgmental forecasting and developing cautions traits among the individuals (Legaki et al., 2021). The incorporation of gamification elements in Personal Financial Management (PFM) apps can meet users' desire for competency and independence, resulting in increased motivation to use them. This motivation positively influences users' perception of the apps' usefulness and ease of use, leading to more favorable attitudes towards them. The study further revealed a positive correlation between users' attitudes towards PFM apps and their behavioral intention to use them. Overall, these findings suggest that gamification can enhance the effectiveness of PFM apps and promote user engagement (Bitrián et al., 2021).

Conclusion:

Overconfidence bias can be both beneficial and dangerous for rational decision making, depending on the context and situation. On the one hand, overconfidence bias can lead individuals to take on challenges and pursue opportunities that they may have otherwise avoided, leading to positive outcomes and achievements. However, on the other hand, overconfidence bias can lead to poor decision-making and negative outcomes, particularly in the context of risk-taking. Overconfident individuals may underestimate the likelihood of negative outcomes, leading to excessive risk-taking and potential harm. Additionally, overconfidence bias can lead individuals to ignore or downplay potential risks, leading to poor decision-making. Furthermore, studies have shown that overconfidence bias is prevalent among investors, particularly those who are actively trading in the stock market. Overconfident investors tend to associate positive market returns with their own security-picking abilities, leading them to trade more aggressively during periods of market gains. This behavior can lead to a positive feedback loop, where the overconfident investors' increased trading activity further reinforces their belief in their abilities, leading to even more aggressive trading. Understanding the impact of overconfidence bias on decision-making is crucial for making informed and objective decisions. By recognizing and managing biases such as overconfidence, individuals can mitigate the negative impact of these biases and make better decisions that are more aligned with their goals and objectives.

References:

1. Baker, H. K., Kumar, S., Goyal, N., & Gaur, V. (2019). How financial literacy and demographic variables relate to behavioral biases. Managerial Finance, 45(1), 124–146. https://doi.org/10.1108/MF-01-2018-0003

2. Bitrián, P., Buil, I., & Catalán, S. (2021). Making finance fun: the gamification of personal financial management apps. International Journal of Bank Marketing, 39(7), 1310–1332. https://doi.org/10.1108/IJBM-02-2021-0074
3. Chen, X., Wang, Z., Deng, S., & Fang, Y. (2017). Risk measure optimization: Perceived risk and overconfidence of structured product investors. Journal of Industrial & Management Optimization, 13(5), 1–20. https://doi.org/10.3934/jimo.2018105
4. Chuang, W.-I., & Lee, B.-S. (2006). An empirical evaluation of the overconfidence hypothesis. Journal of Banking & Finance, 30(9), 2489–2515. https://doi.org/10.1016/j.jbankfin.2005.08.007
5. Corsini, L., & Giannelli, G. C. (2021). Economics education and financial literacy acquisition: Evidence from a field experiment. Journal of Behavioral and Experimental Finance, 32, 100556. https://doi.org/10.1016/j.jbef.2021.100556
6. Cueva, C., Iturbe-Ormaetxe, I., Ponti, G., & Tomás, J. (2019). An experimental analysis of the disposition effect: Who and when? Journal of Behavioral and Experimental Economics, 81, 207–215. https://doi.org/10.1016/j.socec.2019.06.011
7. Gervais, S., & Odean, T. (2001). Learning to Be Overconfident. Review of Financial Studies, 14(1), 1–27. https://doi.org/10.1093/rfs/14.1.1
8. Gupta, S., Goyal, V., Kalakbandi, V. K., & Basu, S. (2018). Overconfidence, trading volume and liquidity effect in Asia’s Giants: evidence from pre-, during- and post-global recession. DECISION, 45(3), 235–257. https://doi.org/10.1007/s40622-018-0185-9
9. Kunjal, D., & Peerbhai, F. (2021). Investor overconfidence in the South African exchange traded fund market. Cogent Economics & Finance, 9(1). https://doi.org/10.1080/23322039.2021.1978190
10. Legaki, N.-Z., Karpouzis, K., Assimakopoulos, V., & Hamari, J. (2021). Gamification to avoid cognitive biases: An experiment of gamifying a forecasting course. Technological Forecasting and Social Change, 167, 120725. https://doi.org/10.1016/j.techfore.2021.120725
11. Musah, G., Domeher, D., & Frimpong, J. M. (2023). Presidential election uncertainty and investor overconfidence bias in sub-Saharan African stock markets. African Journal of Economic and Management Studies, 14(1), 70–85. https://doi.org/10.1108/AJEMS-03-2022-0075
12. Mushinada, V. N. C., & Veluri, V. S. S. (2018). Investors overconfidence behaviour at Bombay Stock Exchange. International Journal of Managerial Finance, 14(5), 613–632. https://doi.org/10.1108/IJMF-05-2017-0093
13. Paisarn, W., Chancharat, N., & Chancharat, S. (2021). Factors Influencing Retail Investors’ Trading Behaviour in the Thai Stock Market. Australasian Business, Accounting & Finance Journal, 15(2), 26–37. https://doi.org/10.14453/aabfj.v15i2.3
14. Scheinkman, J. A., & Xiong, W. (2003). Overconfidence and Speculative Bubbles. Journal of Political Economy, 111(6), 1183–1220. https://doi.org/10.1086/378531
15. Şenol, D., & Onay, C. (2023). Impact of gamification on mitigating behavioral biases of investors. Journal of Behavioral and Experimental Finance, 37, 100772. https://doi.org/10.1016/j.jbef.2022.100772