



Investor Overconfidence and Transaction Losses: Behavioral Challenges for Sustainable Islamic Capital Markets in Indonesia

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ABSTRACT

High overconfidence among investors, reflected in a high degree of calculation error, can distort price perceptions and lead to suboptimal investment decisions in the Sharia capital market. This study aims to examine the relationship between investor overconfidence and the accuracy of stock price predictions in the Indonesian Sharia capital market, positioning itself within behavioral finance by addressing the gap in experimental evidence in Islamic contexts. The research employs a laboratory experimental approach by observing investor reactions after receiving relevant information, with participants classified into three groups based on their level of self-confidence. The experimental design includes two market conditions: markets exposed to negative information and markets without information. The findings reveal that highly overconfident investors tend to overestimate the accuracy of their knowledge, resulting in higher prediction values and greater pricing errors compared to less overconfident investors, indicating a tendency toward self-deception. However, the results also show that higher prediction errors do not always translate into transaction losses. These findings suggest the need to strengthen Islamic investor education to encourage more rational and informed decision-making in Sharia capital markets.

Keywords: overconfidence, price prediction error, sharia capital market, behavioral finance, self-deception.

INTRODUCTION

The basic theory of standard finance emphasizes that markets are efficient, meaning that security prices reflect their fair value even when some investors make biased decisions.¹ In this framework, investors are generally assumed to act rationally, making objective and consistent decisions without

¹ Changtai Li et al., 'Price Change and Trading Volume: Behavioral Heterogeneity in Stock Market', *Computational Economics* 61, no. 2 (2023): 677-713.

being influenced by emotions.² However, insights from psychological research suggest that real-world investors do not always behave rationally.^{3,4} In practice, some investors act irrationally, for example by buying when prices are high and selling when prices are low, which can create market distortions. In contrast, rational investors tend to stabilize the market by making decisions based on fundamental values, such as buying undervalued assets and selling overvalued ones.⁵

Overconfidence is a common form of irrational investor behavior in which individuals overestimate the accuracy of their knowledge, information, and predictive abilities while neglecting objective facts.⁶ It is defined as an overreaction to private information signals and an underreaction to public information.⁷ As a result, overconfident investors tend to rely excessively on their own judgement and trade more frequently because they perceive themselves as possessing an informational advantage.⁸ Empirical evidence suggests that investor overconfidence can contribute to excessive trading and greater trading activity, while potentially reducing investment performance.¹⁰ In addition, investor overconfidence may result in the systematic underestimation or neglect

² Maheen Noor et al., 'The Impact of Renewable and Non-Renewable Energy on Sustainable Development in South Asia', *Environment, Development and Sustainability* 26, no. 6 (2024): 14621–38.

³ Muhammad Umar et al., 'Asymmetric Volatility Structure of Equity Returns: Evidence from an Emerging Market', *The Quarterly Review of Economics and Finance* 87 (2023): 330–36.

⁴ Krishna Reddy et al., 'Overreaction Effect: Evidence from an Emerging Market (Shanghai Stock Market)', *International Journal of Managerial Finance* 17, no. 3 (2021): 416–37.

⁵ Prince Kumar Maurya et al., 'Investor Sentiment and Its Implication on Global Financial Markets: A Systematic Review of Literature', *Qualitative Research in Financial Markets* 18, no. 1 (2026): 209–48.

⁶ Bhuvan Unhelkar et al., 'Enhancing Supply Chain Performance Using RFID Technology and Decision Support Systems in the Industry 4.0–A Systematic Literature Review', *International Journal of Information Management Data Insights* 2, no. 2 (2022): 100084.

⁷ Farrukh Naveed and Hasniza Mohd Taib, 'Overconfidence Bias, Self-Attribution Bias and Investor Decisions: Moderating Role of Information Acquisition', *Pakistan Journal of Commerce and Social Sciences* (ISSN 1997-8553) 15, no. 2 (2021): 354–77.

⁸ Sergei Glebkin and John Chi-Fong Kuong, "When Large Traders Create Noise," *Journal of Financial Economics* 150, no. 2 (2023): 103709; Ruohan Wang et al., "Analysis of Market Equilibrium Based on Overconfidence Behavior of Market Makers," *PLoS ONE* 21, no. 2 (2026): e0335569.

⁹ Paulo Antonelli-Filho et al., "Sensation Seeking and Overconfidence in Day Traders: Evidence from Brazil," *Review of Behavioral Finance* 13, no. 5 (2021): 486–501; David Gorzon et al., "Measuring Costly Behavioral Bias Factors in Portfolio Management: A Review," *Financial Markets and Portfolio Management* 38, no. 2 (2024): 265–95.

¹⁰ Zhaoqi Wang et al., "Overconfidence and Market Performance," *Journal of Behavioral Finance* (2025): 1–16; Jabin Binnendyk and Gordon Pennycook, "Individual Differences in Overconfidence: A New Measurement Approach," *Judgment and Decision Making* 19 (2024): e28; Daniel Feiler and Jordan Tong, "From Noise to Bias: Overconfidence in New Product Forecasting," *Management Science* 68, no. 6 (2022): 4685–702; Eduard Gaar et al., "The Home Bias and the Local Bias: A Survey," *Management Review Quarterly* 72, no. 1 (2022): 21–57; Ravi Lonkani et al., "The Effect of Investors' Emotional and Depressive States on Perceived Returns and Risk," *Journal of Asian Business and Economic Studies* 32, no. 3 (2025): 134–46.

of investment risks, thereby increasing the probability of suboptimal investment decisions. One of the risks of investing in shares is the risk associated with a decline in share prices (capital loss). Information related to global markets, macroeconomics, and the issuer's fundamentals can be used to explain increases or decreases in share prices. The existence of good news and bad news can cause stock prices to rise and fall. Furthermore, investors' responses to the news will cause price prediction errors.

Overconfidence may cause investors in securities markets to underestimate forecasting errors and rely excessively on their own expectations, potentially resulting in suboptimal trading outcomes.¹¹ Investors who are too confident experience trading losses because they do not realize that their predictions deviate relatively far from the prevailing market price. This phenomenon shows that investors engage in self-deceptive behavior because they overestimate the knowledge and information they have.¹² However, other empirical evidence suggests that overconfidence does not necessarily result in financial losses and may, under certain market conditions, contribute to increased trading activity, profitability, or improved market efficiency.¹³ Research on investor overconfidence in capital markets has been extensively conducted in developed countries using both experimental and survey-based approaches. However, this area remains relatively underexplored in emerging markets, particularly within the context of Islamic finance. To the best of the researcher's knowledge, no experimental study has specifically examined investor overconfidence and its impact on transaction losses in the Indonesian Sharia capital market. This gap highlights the need for empirical investigation to better understand how behavioral biases influence investment decisions in this unique market setting.

To the best of the researcher's knowledge, no researcher in Indonesia has used quasi-experiments to demonstrate the impact of overconfident conduct on price forecasts in the country's Sharia stock market. We selected this topic for several reasons. First, the Indonesian Sharia capital market exhibits overconfident behavior due to a methodological deficit. Furthermore, limited studies have specifically examined overconfidence behavior in the Indonesian Islamic capital market, and empirical evidence in the broader Islamic capital market context also remains relatively scarce. Existing studies in behavioral

¹¹ G. Mauricio Mejía, "Theory-Driven or Theory-Informed? A Review of Behavioural Economics in Design," *The Design Journal* 24, no. 4 (2021): 567–87.

¹² Carme Isern-Mas and Ivar R. Hannikainen, 'Self-Deception: A Case Study in Folk Conceptual Structure', *Review of Philosophy and Psychology* 16, no. 2 (2025): 545–72.

¹³ Xing Gao and Daniel Ladley, "Noise Trading and Market Stability," *The European Journal of Finance* 28, nos. 13–15 (2022): 1283–1301, <https://doi.org/10.1080/1351847X.2021.1947338>; Ruohan Wang, Jing Wang, and Zhi Yang, "Analysis of Market Equilibrium Based on Overconfidence Behavior of Market Makers," *PLoS ONE* 21, no. 2 (2026): e0335569, <https://doi.org/10.1371/journal.pone.0335569>; Yuanzhu Lu, Jinming Hu, and Yaxian Gong, "Learning to Be Overconfident and Underconfident," *The Singapore Economic Review* 68, no. 5 (2023): 1815–27, <https://doi.org/10.1142/S0217590822500801>

finance have predominantly focused on conventional capital markets, while research integrating behavioral biases with Sharia-compliant investment behavior is still underdeveloped. Recent literature indicates that behavioral factors such as overconfidence, herding behavior, mental accounting, and loss aversion significantly influence investment decisions among Muslim investors and retail investors in Islamic stock markets.

Several recent studies have highlighted the growing importance of behavioral finance in Islamic capital markets. Behavioral biases, including overconfidence and herding behavior, significantly affect Islamic retail investors' decision-making behavior.¹⁴ Overconfidence influences Indonesian stock investment decisions, particularly among retail investors in emerging markets.¹⁵ In addition, recent empirical evidence indicates that overconfidence remains an important behavioural factor influencing the investment decisions of Generation Z investors in Indonesia, particularly within the context of Sharia-compliant financial decision-making.¹⁶ Recent empirical evidence also shows that Islamic capital markets are not immune to behavioral distortions. Research on the Jakarta Islamic Index (JII) revealed the presence of herding behavior among retail investors in the Indonesian Islamic stock market. Similarly,¹⁷ argued that Islamic capital markets still experience behavioral biases such as overconfidence and herding, although Sharia principles may provide a normative framework that strengthens market discipline. Therefore, this study attempts to fill the existing research gap by examining overconfidence behavior within the Indonesian Islamic capital market context. This research is expected to contribute to the development of behavioral finance literature, particularly in the area of Islamic capital markets, by providing empirical evidence from an emerging Muslim-majority market.

Second, the Sharia capital market has expanded quickly in the past few years, as evidenced by the IDR 3,666.69 trillion Sharia share capitalization and IDR 1,363.43 trillion non-share Sharia asset capitalization achieved in 2019. Being the world's largest Muslim nation, Indonesia appeals to Muslim investors who want to make investments and contrast the overconfidence of other Muslim nations. The findings of the study encourage further investigation into the effects of overconfidence behavior on the accuracy of stock price predictions made by investors, as well as the impact of negative news on stock price

¹⁴ Rita Satria et al., 'Behavioral Biases in Islamic Retail Investing: The Moderating Role of Demographics', *Share: Jurnal Ekonomi Dan Keuangan Islam* 14, no. 1 (2025): 494–515.

¹⁵ Johny Budiman et al., 'How Overconfidence and Mental Accounting Influence Investments? The Moderating Role of Financial Literacy', *Asian Management and Business Review*, 2025, 1–18.

¹⁶ Achmad Fauzi, "The Role of Sharia Financial Literacy in Moderating the Effect of Overconfidence on Generation Z Investment Decisions in the Indonesian Capital Market," *JIA (Jurnal Ilmiah Akuntansi)* 10, no. 2 (2025): 248–61, <https://doi.org/10.23887/jia.v10i2.97759>

¹⁷ Adibah Yahya et al., 'Herding Behavior in the Sharia Capital Market on Investment Decisions', *JRAK* 16, no. 1 (2024): 107–18.

accuracy and the effects of overconfidence on investment outcomes as a phenomenon suggested by the Self-Deception Theory.

The size of the mistake in stock price prediction indicates this overconfident habit. An investor tends to make more mistakes the more overconfident he acts. Li, Hale, and Moore argue that overconfidence should not necessarily be regarded as a stable individual trait, as its manifestation may vary across contexts, domains, and measurement approaches.¹⁸ Their findings distinguish among three forms of overconfidence overestimation, overplacement, and overprecision and show that these dimensions do not exhibit the same degree of stability across individuals. These findings provide a useful behavioural framework for examining how different forms of investor overconfidence may influence stock-price expectations and investment decision-making in Islamic capital markets.

LITERATURE REVIEW

The overconfidence phenomenon refers to a cognitive bias whereby decision-makers place excessive weight on their own knowledge, judgement, and the perceived accuracy of the information they possess, while giving insufficient consideration to publicly available or external information.¹⁹ Overconfidence refers to the belief that an individual possesses greater knowledge or skills than is actually supported by facts in a specific domain.²⁰ It generally manifests in three forms.²¹ First, misestimation occurs when individuals inaccurately estimate quantities or outcomes. Second, misplacement reflects the tendency to rate one's abilities higher than others in relative comparisons. Third, misprecision refers to excessive confidence in the accuracy of one's predictions. In the context of the Indonesian Sharia capital market, for example, an investor may believe that their personal analysis of a Sharia-compliant stock is more accurate than publicly available information, leading to overly confident decisions that may not align with actual market conditions.

When confronted with unfavourable information, overconfident decision-makers may place excessive reliance on their existing beliefs and insufficiently adjust their expectations, thereby increasing the likelihood of forecasting errors

¹⁸ Sophia Li, Randall Hale, and Don A. Moore, "Is Overconfidence an Individual Difference?," *Judgment and Decision Making* 20 (2025): e25, <https://doi.org/10.1017/jdm.2025.11>

¹⁹ Brad M. Barber and Terrance Odean, "Boys Will Be Boys: Gender, Overconfidence, and Common Stock Investment," *The Quarterly Journal of Economics* 116, no. 1 (2001): 261–92, <https://doi.org/10.1162/003355301556400>; Ahmed Bouteska, Murad Harasheh, and Mohammad Zoynul Abedin, "Revisiting Overconfidence in Investment Decision-Making: Further Evidence from the U.S. Market," *Research in International Business and Finance* 66 (2023): 102028, <https://doi.org/10.1016/j.ribaf.2023.102028>; Qin Ran, Xiangrui Chao, Francisco J. Cabrerizo, and Enrique Herrera-Viedma, "Managing Overconfidence Behaviors From Heterogeneous Preference Relations in Linguistic Group Decision Making," *IEEE Transactions on Fuzzy Systems* 31, no. 7 (2023): 2435–49, <https://doi.org/10.1109/TFUZZ.2022.3226321>.

²⁰ Vlad Petre Glăveanu, *The Palgrave Encyclopedia of the Possible* (Springer, 2022).

²¹ Glăveanu, *The Palgrave Encyclopedia of the Possible*.

and suboptimal decisions.²² Variations in overconfidence levels also influence how individuals interpret and evaluate information, thereby affecting their decision-making and problem-solving processes.²³ Overconfidence behavior also encourages investors to trade excessively in the stock market. Investors with high levels of overconfidence tend to overestimate their informational advantages and market forecasting abilities, which motivates them to conduct more frequent transactions. Such behaviour may lead to higher transaction costs, greater exposure to market risk, and suboptimal investment performance, particularly when overconfidence encourages excessive trading and frequent portfolio adjustments.²⁴

When receiving bad news or unfavorable information, overconfident investors tend to rely excessively on their own judgments and adjust their predictions less accurately than rational investors, resulting in higher prediction errors.²⁵ This behavior reflects a tendency to overestimate personal knowledge while underestimating external market signals, leading to biased decision-making and suboptimal investment outcomes.²⁶ Differences in the level of overconfidence influence how investors interpret and evaluate information, which ultimately leads to variations in decision-making quality and problem-solving approaches.²⁷ Another important consequence of overconfidence is the tendency of investors to engage in excessive trading in the stock market. Overconfident investors often overestimate their knowledge and predictive abilities, which leads them to trade more frequently than rational investors. Recent empirical evidence confirms that overconfidence significantly increases trading activity and intensity, particularly among retail investors in emerging

²² David Gorzon, Marc Bormann, and Rüdiger von Nitzsch, "Measuring Costly Behavioral Bias Factors in Portfolio Management: A Review," *Financial Markets and Portfolio Management* 38, no. 2 (2024): 265–95, <https://doi.org/10.1007/s11408-024-00444-7>; Qin Ran, Xiangrui Chao, Francisco J. Cabrerizo, and Enrique Herrera-Viedma, "Managing Overconfidence Behaviors From Heterogeneous Preference Relations in Linguistic Group Decision Making," *IEEE Transactions on Fuzzy Systems* 31, no. 7 (2023): 2435–49, <https://doi.org/10.1109/TFUZZ.2022.3226321>.

²³ Markus M. Möbius et al., 'Managing Self-Confidence: Theory and Experimental Evidence', *Management Science* 68, no. 11 (2022): 7793–817.

²⁴ Brad M. Barber and Terrance Odean, "Trading Is Hazardous to Your Wealth: The Common Stock Investment Performance of Individual Investors," *The Journal of Finance* 55, no. 2 (2000): 773–806, <https://doi.org/10.1111/0022-1082.00226>; John R. Graham, Campbell R. Harvey, and Hai Huang, "Investor Competence, Trading Frequency, and Home Bias," *Management Science* 55, no. 7 (2009): 1094–1106, <https://doi.org/10.1287/mnsc.1090.1009>; Kent Daniel and David Hirshleifer, "Overconfident Investors, Predictable Returns, and Excessive Trading," *Journal of Economic Perspectives* 29, no. 4 (2015): 61–88, <https://doi.org/10.1257/jep.29.4.61>.

²⁵ Syed Aliya Zahera and Rohit Bansal, 'Do Investors Exhibit Behavioral Biases in Investment Decision Making? A Systematic Review', *Qualitative Research in Financial Markets* 10, no. 2 (2018): 210–51, <https://doi.org/10.1108/QRFM-04-2017-0028>.

²⁶ H. Kent Baker et al., 'Personality Traits and Investor Sentiment', *Review of Behavioral Finance* 13, no. 4 (2021): 354–69.

²⁷ Jitender Kumar and Neha Prince, 'Overconfidence Bias in Investment Decisions: A Systematic Mapping of Literature and Future Research Topics', *FIIB Business Review*, 2023.

markets. Similarly, studies show that overconfident investors tend to demand more risky assets, incur higher transaction costs, and engage in frequent trading that may reduce overall investment efficiency. Furthermore, excessive trading behavior driven by overconfidence has been associated with suboptimal long-term outcomes, as investors focus on short-term gains while ignoring transaction costs and risk exposure. These findings indicate that overconfidence remains a critical behavioral bias influencing trading frequency and investment performance in modern financial markets.

A confidence level calibration test is widely used to assess an individual's level of self-confidence by comparing subjective confidence with objective accuracy. This approach typically employs structured questionnaires to evaluate the extent to which perceived knowledge aligns with actual performance, making it a robust method for detecting overconfidence bias in decision-making contexts. Recent research continues to highlight the importance of accurately measuring investor overconfidence, including the extent to which investors miscalibrate their abilities, risk tolerance, and confidence in investment-related judgements.²⁸ Within Islamic finance, Begam, Babu, and Sulphey extend conventional behavioural finance approaches by developing and validating the Islamic Investor's Sentiment Scale, providing a context-specific instrument for assessing investor sentiment and behavioural tendencies in Sharia-compliant stock market investment.²⁹ Furthermore, contemporary evidence highlights that discrepancies between perceived and actual knowledge significantly influence investment decisions, often leading to biased judgments and suboptimal outcomes.³⁰ These findings demonstrate that calibration techniques, supported by recent empirical research, remain essential tools for understanding investor psychology and measuring overconfidence in both conventional and Sharia capital markets.

The overconfidence score, which is calculated by subtracting the average percentage of accurate answers from the average level of probability confidence, indicates the degree of overconfidence. This will produce a negative number that reflects unconfident conduct if the average probability of belief is less than the average proportion of truth in the judgment. On the contrary, if the average probability of belief is higher than the average proportion of truth in the judgment, this situation will result in a positive value of overconfidence. Overconfidence scores have three levels: low, medium, and high.

²⁸ Honoka Nabeshima et al., "Overconfidence and Investment Loss Tolerance: A Large-Scale Survey Analysis of Japanese Investors," *Risks* 13, no. 8 (2025): 142; Muhammad Asad Ullah et al., "Investor Overconfidence in the AI Era: Human vs. Algorithmic Decision-Making," *Journal of Social & Organizational Matters* 5, no. 1 (2026): 203–17; Dominik M. Piehlmaier, "The One-Man Show: The Effect of Joint Decision-Making on Investor Overconfidence," *Journal of Consumer Research* 50, no. 2 (2023): 426–446.

²⁹ M. Rahila Begam, M. Babu, and M. M. Sulphey, "Development and Validation of an Islamic Investor's Sentiment Scale for Stock Market Investment," *Business Perspectives and Research* 12, no. 1 (2024): 26–44, <https://doi.org/10.1177/22785337221148888>.

³⁰ Baker et al., 'Personality Traits and Investor Sentiment'.

Variations in confidence levels produce differences in information interpretation. This affects the types of solutions selected.³¹ Psychology research shows that overconfident individuals make more errors in forecasting compared to rational decision-makers. This conclusion is closely related to the concept of self-deception theory, which explains that individuals tend to develop overly favorable beliefs about their own abilities and judgments. Individuals cannot fully control signals reflecting their actual internal conditions, allowing others to infer psychological states through nonverbal cues such as posture, eye contact, tone of voice, and speech patterns.³² In behavioral finance, self-deception encourages investors to selectively process information that supports their prior beliefs while ignoring contradictory evidence. As a result, decision-makers may perceive themselves as more competent, knowledgeable, or capable than they actually are, which ultimately fosters overconfident behavior and biased decision-making.

Recent empirical studies further strengthen the relevance of self-deception theory in emerging and Sharia financial markets. Investors in Islamic capital markets tend to exhibit confirmation-driven behavior by favoring information that aligns with their prior expectations, particularly during periods of market uncertainty.³³ Overconfident investors in emerging markets frequently underestimate investment risk and overestimate their forecasting abilities, leading to irrational trading behavior and suboptimal portfolio performance³⁴. These findings suggest that self-deception not only influences cognitive evaluations but also shapes investment decisions and market behavior, particularly in environments characterized by information asymmetry and high uncertainty.

Investor reaction when the market does not provide any information

Psychological research suggests that individuals are particularly susceptible to overconfidence when making decisions under uncertainty and cognitive complexity, conditions that may lead them to overestimate the accuracy of their judgements and underestimate the limitations of their knowledge.³⁵ significant overconfident investors tend to overestimate the

³¹ Chad C. Williams et al., 'Stabilizing Expectations When Shifting from Analytical to Intuitive Reasoning: The Role of Prediction Errors in Reasoning', *Cortex* 161 (2023): 145-153.

³² Peter Schwardmann and Joel Van der Weele, 'Deception and Self-Deception', *Nature Human Behaviour* 3, no. 10 (2019): 1055-61.

³³ Berto Usman et al., 'Exploring Investor Attention in Shariah Markets, Macroeconomic Influences, and Corporate Performance: Insights from Indonesia', *Social Sciences & Humanities Open* 10 (January 2024): 101015, <https://doi.org/10.1016/j.ssaho.2024.101015>.

³⁴ Saima Aziz et al., 'Role of Behavioral Biases in the Investment Decisions of Pakistan Stock Exchange Investors: Moderating Role of Investment Experience', *Investment Management & Financial Innovations* 21, no. 1 (2024): 146.

³⁵ Fumeng Yang, Maryam Hedayati, and Matthew Kay, "Subjective Probability Correction for Uncertainty Representations," in *Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems* (2023): 1-17, <https://doi.org/10.1145/3544548.3580998>; Jack B. Soll, Asa B. Palley, Joshua Klayman, and Don A. Moore, "Overconfidence in Probability Distributions: People Know They Don't Know, but They Don't Know What to Do about It," *Management Science* 70, no.

accuracy of information and knowledge in uncertain conditions, such as the pre-opening period, which leads to significant forecast mistakes. Conversely, low-overconfident investors, who typically possess a great deal more knowledge than high overconfident investors, prefer to trade more cautiously since they are aware that they are just human beings with limited skills and expertise. Compared to investors with high levels of overconfidence, this conduct typically yields reduced forecast mistakes. This phenomenon demonstrates how overconfident, high-achieving investors have acted in a self-deceptive manner due to a mismatch between their perceived and actual abilities. Experimental evidence suggests that investors may exhibit overconfidence when forming expectations in asset markets, leading to systematic discrepancies between subjective forecasts and realised market outcomes.³⁶ First hypothesis (H₁): Investors with high overconfidence have a higher average prediction error than investors with low overconfidence in the pre-opening market. Overconfident investors have a higher average prediction error, they will suffer transaction losses. This loss shows that there will be a transfer of wealth from high overconfident investors to low.³⁷ Second hypothesis (H₂): Highly overconfident investors suffer transaction losses in the pre-opening period.

Investor reaction when the market delivers bad news

A person's optimism and pessimism regarding the veracity of the news or event in issue determines the extent of the price increase in the market as a result of it.³⁸ Information that sends a negative message and lowers stock market values is bad news for investors. When stock prices decline, investors experience a reduction in the market value of their holdings; such losses may be amplified when behavioural biases, particularly overconfidence, contribute to mispricing and excessive market reactions.³⁹ Both more and less knowledgeable people will anticipate incorrectly when they receive terrible news, but highly overconfident people will produce a larger average price error than lowly overconfident people. Empirical evidence suggests that highly overconfident investors may place excessive weight on their own information and respond insufficiently to adverse

11 (2024): 7422–42, <https://doi.org/10.1287/mnsc.2019.00660>; Ulrich Hoffrage, "Overconfidence," in *Cognitive Illusions: Intriguing Phenomena in Thinking, Judgement, and Memory*, ed. Rüdiger F. Pohl (London: Routledge, 2022), 287–306, <https://doi.org/10.4324/9781003154730-21>.

³⁶ Erich Kirchler and Boris Maciejovsky, "Simultaneous Over- and Underconfidence: Evidence from Experimental Asset Markets," *Journal of Risk and Uncertainty* 25, no. 1 (2002): 65–85, <https://doi.org/10.1023/A:1016319430881>.

³⁷ Mahatma Kufepaksi, 'The Contribution of Self-Deceptive Behavior on Price Discovery, An Experimental Approach', *Asia Pacific Management Review* 13, no. 1 (2007): 419–34, <https://doi.org/10.6126/APMR.2008.13.1.06>.

³⁸ Dale Griffin and Amos Tversky, 'The Weighing of Evidence and the Determinants of Confidence', *Cognitive Psychology* 24, no. 3 (1992): 411–35.

³⁹ Andrei Shleifer, *Inefficient Markets: An Introduction to Behavioral Finance* (Oxford: Oxford University Press, 2000), <https://doi.org/10.1093/0198292279.001.0001>; Kent Daniel, David Hirshleifer, and Avanidhar Subrahmanyam, "Investor Psychology and Security Market Under- and Overreactions," *The Journal of Finance* 53, no. 6 (1998): 1839–85, <https://doi.org/10.1111/0022-1082.00077>.

market signals, thereby increasing the likelihood of pricing errors and unfavourable trading outcomes.⁴⁰ Third conjecture (H₃): When the market conveys unfavorable news, very overconfident investors tend to make more price errors on average than investors who are lowly overconfident. Overconfident investors will have transaction losses since they have a larger average forecast error. This loss suggests that investors with high levels of overconfidence will shift their capital to investors with low levels of overconfidence. Fourth hypothesis (H₄): Highly overconfident investors suffer transaction losses when the market signals bad news.

METHODS

This study employs an experimental design using overestimation calibration to measure the level of investor overconfidence. The participants consisted of undergraduate students who had completed courses in financial management, capital markets, and investment management but had not yet engaged in real capital market investment activities. University students were selected because they possess sufficient theoretical knowledge of investment decision-making and financial markets, making them suitable proxies for novice investors in an experimental setting. In addition, students are frequently used in behavioral finance experiments because they provide a controlled environment that allows researchers to isolate psychological biases, such as overconfidence, without the influence of extensive market experience or professional trading habits.⁴¹ Prior to the experiment, participants completed a calibration test adapted from previous overconfidence studies. A total of 30 participants met the calibration criteria and were subsequently classified into three groups based on their level of overconfidence: (1) high overconfidence, (2) moderate overconfidence, and (3) low overconfidence, with each group consisting of ten participants. These groups then participated in simulated stock trading activities to determine stock price behavior in the market setting.⁴² Nevertheless, the study acknowledges that the use of undergraduate students may limit the generalizability of the findings to actual investors in the Sharia capital market. Real investors typically possess broader investment experience, stronger emotional exposure to financial risk, and more complex decision-making considerations than student participants. Therefore, while students are appropriate for examining behavioral tendencies in a controlled experimental

⁴⁰ Robert Bloomfield, Robert Libby, and Mark W. Nelson, "Confidence and the Welfare of Less-Informed Investors," *Accounting, Organizations and Society* 24, no. 8 (1999): 623-47, [https://doi.org/10.1016/S0361-3682\(99\)00025-2](https://doi.org/10.1016/S0361-3682(99)00025-2); Robert Bloomfield and Robert Libby, "Market Reactions to Differentially Available Information in the Laboratory," *Journal of Accounting Research* 34, no. 2 (1996): 183-207, <https://doi.org/10.2307/2491499>.

⁴¹ Kufepaksi, 'The Contribution of Self-Deceptive Behavior on Price Discovery, An Experimental Approach'.

⁴² Joshua Klayman et al., 'Overconfidence: It Depends on How, What, and Whom You Ask', *Organizational Behavior and Human Decision Processes* 79, no. 3 (1999): 216-47, <https://doi.org/10.1006/obhd.1999.2847>.

context, future studies are encouraged to involve professional or active Sharia investors to enhance the external validity of the findings.

This study employs a hybrid experimental design that combines both between-subject and within-subject approaches. The between-subject design is used to compare the effects of the same treatment across different groups of participants with varying levels of overconfidence. Specifically, this design examines differences in average stock price prediction errors and investment returns among investors categorized into high, moderate, and low overconfidence groups after receiving identical market information and trading conditions. By comparing these groups, the study aims to identify whether higher levels of overconfidence lead to greater prediction bias and differences in trading performance. In addition, the study applies a within-subject design using repeated measures, in which the same participants are exposed to multiple trading conditions over several experimental sessions. This approach allows the researcher to observe changes in investor behavior and decision-making consistency across different market situations while controlling for individual-specific characteristics. A repeated-measures design was employed to capture within-participant changes in investor behaviour across experimental conditions while minimising the influence of individual-level heterogeneity.⁴³

The experiment utilizes stock trading simulation software designed to replicate the trading environment of the Indonesian Islamic capital market. The study specifically focuses on the pre-opening trading session, during which investors submit buy and sell orders before the main market session begins. The pre-opening session is particularly relevant for examining overconfidence because investors must make trading decisions under conditions of limited information, uncertainty, and short time constraints. In this setting, overconfident investors are more likely to rely excessively on their own judgments and private beliefs when predicting stock prices, which may lead to inaccurate forecasts and aggressive trading behavior. Therefore, the pre-opening market provides an appropriate experimental context for observing how overconfidence influences price expectations and investment decisions before actual market equilibrium is established. During the approximately five-minute pre-opening session, all participants were instructed to submit trading orders indicating the quantity of securities they intended to buy or sell at their expected prices. The submitted orders were then used to generate simulated market prices representing collective investor expectations for the trading day.

For hypothesis testing, the study employs several statistical techniques. Independent sample t-tests and one-way ANOVA are used to compare prediction errors and investment returns across investor groups with different

⁴³ Mahatma Kufepaksi, "The Contribution of Self-Deceptive Behavior on Price Discovery: An Experimental Approach," *Asia Pacific Management Review* 13, no. 1 (2008): 419–34; Irwan Trinugroho and Roy Sembel, "Overconfidence and Excessive Trading Behavior: An Experimental Study," *International Journal of Business and Management* 6, no. 7 (2011): 147–52, <https://doi.org/10.5539/ijbm.v6n7p147>.

levels of overconfidence. Repeated measures ANOVA is applied to analyze behavioral changes within the same participants across multiple trading sessions. In addition, regression analysis is conducted to examine the extent to which overconfidence influences stock price prediction errors and trading returns. These statistical methods provide a more rigorous evaluation of the relationship between overconfidence and investor decision-making behavior in the Islamic capital market context.

RESULT AND DISCUSSION

Prediction Error (Price) in Pre-Opening session

The calculation results are presented in Table 4. Panels A, B, and C of Table 4 indicate that investors in all three pre-opening markets made stock valuation decisions under conditions of limited market information. In such uncertain environments, investment decisions are more likely to rely on individual confidence, subjective judgment, and perceived knowledge rather than complete market signals. The findings show that highly overconfident investors generated higher stock price prediction values than low-overconfidence investors, reflecting their tendency to overestimate the accuracy of their private information and analytical abilities. Consequently, highly overconfident investors exhibited significantly higher average prediction errors across all three pre-opening market sessions. The results of the independent sample t-test further confirm that the differences in average prediction errors between high-overconfidence and low-overconfidence investors are statistically significant in each pre-opening market. These findings support the behavioral finance argument that excessive confidence can distort investor judgment and reduce forecasting accuracy in uncertain market conditions.

Overconfident investors tend to overestimate their investment skills and engage in less accurate decision-making, particularly when operating with incomplete information.⁴⁴ Their study also found that excessive confidence increases trading intensity and leads investors to rely excessively on subjective beliefs rather than objective market fundamentals. Similarly, the present study shows that highly overconfident investors were more likely to generate inaccurate stock valuations during the pre-opening session because they placed greater confidence in their own expectations despite limited information availability.

Behavioral biases, including overconfidence, significantly influence investor decision-making in Sharia-compliant financial markets. Their findings suggest that even within Islamic investment environments, where ethical considerations and prudential principles are emphasized, investors may still exhibit cognitive biases that affect rational decision-making. The current study extends this literature by providing experimental evidence that overconfidence influences stock price prediction errors during the pre-opening trading process

⁴⁴ Barber and Odean, 'Boys Will Be Boys: Gender, Overconfidence, and Common Stock Investment'.

in the Indonesian Islamic capital market⁴⁵. In other words, high-overconfidence investors produce significantly higher average prediction errors than low-overconfidence investors. These findings reflect that investors are overconfident. High investors cannot prove that they obtain better knowledge and information than low overconfident investors because they fail to produce lower prediction errors. Thus, highly overconfident investors exhibit self-deceptive behaviour across all three pre-opening market sessions. This finding is consistent with previous studies suggesting that overconfidence may persist through trading experience and affect investor behaviour during the price-discovery process.⁴⁶

The findings indicate that highly overconfident investors exhibit greater prediction errors than low-overconfidence investors across the three pre-opening market sessions, thereby supporting the first hypothesis. The study further reveals that when the market receives negative information, highly overconfident investors experience a decline in prediction accuracy, whereas low-overconfidence investors tend to improve their prediction accuracy by reducing their average price errors (see Panels D and E in Table 4). As a result, the gap in mean prediction errors between the two groups becomes increasingly wider following the introduction of bad news into the market.

These findings provide empirical support for the self-deception theory, which suggests that individuals tend to maintain overly favorable beliefs about their own abilities even when confronted with contradictory information. Highly overconfident investors are more likely to interpret negative market signals in a biased manner because they excessively rely on their prior beliefs and private judgments while underreacting to external information. Consequently, they become less willing to revise their expectations objectively when unfavorable news emerges. Overconfident investors tend to overweight the precision of their private information and underestimate public signals, particularly under uncertain market conditions.⁴⁷ Overconfident investors frequently misinterpret market information due to excessive belief in their own analytical capabilities, leading to suboptimal investment decisions and higher forecasting errors. In the context of negative news, such investors may respond defensively by selectively interpreting information that confirms their existing expectations while ignoring evidence that contradicts their beliefs.⁴⁸

⁴⁵ Muhammad Syahrul Hidayat et al., 'Ethnomethodology Approach in Investment Decision Making in Islamic Capital Market: An Interaction and Social Practice of Market Participants', *Majalah Journal of Islamic Finance and Management* 3, no. 2 (2023): 127–47.

⁴⁶ Yuanzhu Lu, Jinming Hu, and Yaxian Gong, "Learning to Be Overconfident and Underconfident," *The Singapore Economic Review* 68, no. 5 (2023): 1815–1827, <https://doi.org/10.1142/S0217590822500801>; Mahatma Kufepaksi, "The Contribution of Self-Deceptive Behavior on Price Discovery: An Experimental Approach," *Asia Pacific Management Review* 13, no. 1 (2008): 419–434.

⁴⁷ Venkata Narasimha Chary Mushinada, 'Are Individual Investors Irrational or Adaptive to Market Dynamics?', *Journal of Behavioral and Experimental Finance* 25 (2020): 100243.

⁴⁸ Barber and Odean, 'Boys Will Be Boys: Gender, Overconfidence, and Common Stock Investment'.

Recent behavioral finance studies also support this explanation. Investors in Islamic capital markets are not immune to behavioral biases, including overconfidence, especially when facing uncertain or unfavorable market conditions. Their findings indicate that emotional attachment to personal judgment and excessive confidence in prior expectations can reduce the ability of investors to process negative information rationally. Therefore, the present study extends previous literature by showing that overconfidence not only increases prediction errors but also weakens investors' adaptive responses to adverse market information in the Indonesian Islamic capital market.⁴⁹ The results of these calculations imply that highly overconfident investors engage in overconfident behavior because they overestimate the accuracy of their knowledge and information to such an extent that it results in higher average price errors. Thus, they engage in self-deceptive behavior in those trading sessions. These results support the third hypothesis.

Profit and Loss on Trading Transactions

Transaction losses are not always experienced by overconfident investors, even when they produce inaccurate stock price predictions. Although highly overconfident investors generate larger average prediction errors than low-overconfidence investors, the findings presented in Panels A, D, and E indicate that they still have opportunities to obtain trading profits. Overconfident investors may nevertheless realise short-term gains, even when their decisions are characterised by biased judgements and excessive reliance on private information; however, such gains do not necessarily imply superior investment performance, particularly when overconfidence induces excessive trading.⁵⁰ This phenomenon implies that investors who can communicate stock value predictions quickly and close to prevailing market expectations may still gain profits even when their average prediction errors are relatively high.

The findings further demonstrate that market outcomes are not solely determined by the absolute accuracy of predictions but also by how closely investors' expectations align with the collective beliefs of market participants. In speculative trading environments, particularly during pre-opening market sessions, investors often react not only to fundamental information but also to anticipated market sentiment. Consequently, highly overconfident investors may

⁴⁹ Muhammad Syahrul Hidayat et al., 'Ethnomethodology Approach in Investment Decision Making in Islamic Capital Market: An Interaction and Social Practice of Market Participants', *Majalahit Journal of Islamic Finance and Management* 3, no. 2 (2023): 127–47.

⁵⁰ Brad M. Barber and Terrance Odean, "Boys Will Be Boys: Gender, Overconfidence, and Common Stock Investment," *The Quarterly Journal of Economics* 116, no. 1 (2001): 261–92, <https://doi.org/10.1162/003355301556400>; Markus Glaser and Martin Weber, "Overconfidence and Trading Volume," *The Geneva Risk and Insurance Review* 32, no. 1 (2007): 1–36, <https://doi.org/10.1007/s10713-007-0003-3>; Erik Eyser, Matthew Rabin, and Dimitri Vayanos, "Financial Markets Where Traders Neglect the Informational Content of Prices," *The Journal of Finance* 74, no. 1 (2019): 371–99, <https://doi.org/10.1111/jofi.12729>; Jiayu Huang et al., "Gauging the Effect of Investor Overconfidence on Trading Volume from the Perspective of the Relationship between Lagged Stock Returns and Current Trading Volume," *International Finance* 25, no. 1 (2022): 103–23, <https://doi.org/10.1111/inf.12405>.

exploit temporary market inefficiencies by trading aggressively based on their subjective beliefs before prices fully adjust to available information.

Higher prediction errors do not always lead to trading losses because profits in financial markets are influenced not only by the accuracy of fundamental valuation but also by market dynamics, investor sentiment, timing, and the behavior of other market participants. In speculative market environments, investors can still obtain profits if their trading decisions align with prevailing market expectations, even when their estimated stock values deviate from intrinsic or fundamental prices. This explains why highly overconfident investors may occasionally earn profits despite producing larger average prediction errors.

From the perspective of behavioral finance, this phenomenon can be explained through the noise trader theory⁵¹. The theory argues that irrational or sentiment-driven investors can temporarily influence market prices away from their fundamental values. When many market participants simultaneously exhibit optimism or pessimism, stock prices may move according to collective sentiment rather than objective valuation. Under such conditions, highly overconfident investors may benefit from short-term price fluctuations if they successfully anticipate market sentiment, even though their predictions are fundamentally inaccurate.

This finding is also consistent with Keynes's "beauty contest" analogy, which suggests that investors often attempt to predict how other market participants will behave rather than focusing solely on intrinsic asset values. In this context, successful trading depends not only on identifying the true value of a stock but also on forecasting the expectations and reactions of other investors. Consequently, investors with higher prediction errors may still generate profits if their expectations are sufficiently close to the market consensus during the trading process.

Moreover, overconfident investors tend to trade more aggressively and react faster to market opportunities. Overconfident investors excessively rely on their private information and subjective judgments, leading them to participate more actively in trading activities. Although such behavior often increases the risk of mispricing and long-term inefficiency, it may also allow investors to exploit temporary market momentum and short-term price inefficiencies before prices fully adjust.⁵²

However, Panels B and C of Table 5 show that highly overconfident investors also experience trading losses because they generate significantly larger prediction errors than low-overconfidence investors. This finding supports the argument that overconfidence does not consistently lead to superior trading performance. Although highly overconfident investors occasionally gain profits,

⁵¹ Joel Peress and Daniel Schmidt, 'Glued to the TV: Distracted Noise Traders and Stock Market Liquidity', *The Journal of Finance* 75, no. 2 (2020): 1083–133.

⁵² Barber and Odean, 'Boys Will Be Boys: Gender, Overconfidence, and Common Stock Investment'.

their average profit margin remains lower than that of low-overconfidence investors. Therefore, the findings indicate the existence of wealth transfers from highly overconfident investors to less overconfident investors, thereby supporting the second hypothesis.

Overconfident investors tend to trade excessively and ultimately experience lower net returns due to poor judgment and higher transaction costs⁵³. Overconfident investors systematically overestimate the precision of their private information, causing them to misprice securities and make inefficient investment decisions⁵⁴. In the long run, these behavioral biases may reduce portfolio performance even when investors occasionally achieve temporary gains. An important finding of this study is that some highly overconfident investors still generate profits despite engaging in self-deceptive behavior and producing larger average mispricing errors. This result partially differs from conventional assumptions in behavioral finance that overconfidence necessarily leads to trading losses. The findings indicate that when highly overconfident investors provide stock price predictions close to prevailing market expectations, they may still obtain profits even if their predictions deviate from the securities' fundamental values.

This phenomenon can be explained by the interaction between overconfidence and collective market sentiment. During the pre-opening session, market prices are formed through aggregated investor expectations rather than fully reflecting intrinsic values. As a result, if most market participants exhibit similar optimistic biases, highly overconfident investors may successfully profit from temporary price distortions. In this context, profits emerge not because investors possess superior information, but because they correctly anticipate the behavior and expectations of other market participants. The findings further reveal that highly overconfident investors continue to earn profits in some situations despite producing larger average prediction errors after receiving bad news. This result suggests that highly overconfident investors may strategically exploit pessimistic reactions from low-overconfidence investors. When less confident investors respond conservatively to negative information, highly overconfident investors may take advantage of temporary price declines by trading more aggressively.

Overconfident investors tend to underreact to public information while excessively relying on their own beliefs. In uncertain market conditions, such investors may perceive bad news as temporary noise rather than as a reflection of deteriorating fundamentals.⁵⁵ Consequently, they continue trading aggressively and occasionally benefit from short-term market rebounds or delayed market corrections. In the context of Islamic capital markets, these

⁵³ Barber and Odean, 'Boys Will Be Boys: Gender, Overconfidence, and Common Stock Investment'.

⁵⁴ Huang et al., 'Gauging the Effect of Investor Overconfidence on Trading Volume from the Perspective of the Relationship between Lagged Stock Returns and Current Trading Volume'.

⁵⁵ Mushinada, 'Are Individual Investors Irrational or Adaptive to Market Dynamics?'

findings are particularly important because Sharia investors are generally expected to behave more prudently and ethically due to the principles of Islamic finance. However, the present study demonstrates that behavioral biases such as overconfidence remain influential even within Sharia-compliant trading environments. Psychological biases continue to affect investment decisions among Muslim investors despite the ethical foundations of Islamic financial systems.⁵⁶

This finding has important practical implications for investor education, risk management, and policy development in Indonesia's Islamic capital market. The evidence that highly overconfident investors can still obtain short-term profits despite producing larger prediction errors suggests that investors may become overly convinced of the effectiveness of subjective judgment and speculative trading behavior. If not properly addressed, this condition may encourage excessive risk-taking, irrational trading decisions, and short-term speculative behavior that contradicts the prudential and ethical principles underlying Islamic finance. From an investor education perspective, the findings highlight the importance of strengthening behavioral finance literacy among Sharia-compliant investors. Investor education programs in Indonesia's Islamic capital market should not only focus on technical analysis and financial knowledge but also emphasize psychological biases such as overconfidence, self-deception, herd behavior, and emotional decision-making. Investors need to understand that temporary trading profits do not necessarily reflect superior analytical ability or rational investment behavior. Without adequate awareness, investors may misinterpret short-term gains as evidence of skill, which could reinforce excessive confidence and increase exposure to future investment losses.

The findings also imply that financial literacy initiatives should promote long-term investment orientation and risk awareness consistent with Islamic investment principles. Sharia-compliant investors should be encouraged to base investment decisions on fundamental analysis, prudent risk assessment, and ethical considerations rather than speculative market sentiment. In this context, Islamic financial institutions, universities, and capital market authorities could collaborate to develop behavioral finance education programs specifically tailored for Muslim investors. In terms of risk management, the results suggest that overconfidence may increase market vulnerability during periods of uncertainty or negative information. Highly overconfident investors tend to underestimate risks and overreact to their private judgments, which may amplify market volatility and mispricing in the short run. Therefore, brokerage firms, investment advisors, and Islamic financial institutions should incorporate behavioral risk assessment into their investment advisory processes. For example, investor profiling systems could include behavioral indicators such as risk tolerance, trading frequency, and confidence levels to identify investors who may be more susceptible to cognitive biases.

⁵⁶ Hidayat et al., 'Ethnomethodology Approach in Investment Decision Making in Islamic Capital Market: An Interaction and Social Practice of Market Participants'.

Furthermore, the findings have implications for policymakers and regulators in Indonesia's Islamic capital market. Regulatory authorities such as the Financial Services Authority (OJK) and the Indonesia Stock Exchange (IDX) may need to strengthen investor protection mechanisms and improve transparency during pre-opening trading sessions, where information asymmetry and speculative behavior are more likely to occur. Policies aimed at improving information disclosure, market transparency, and investor education may help reduce the influence of irrational trading behavior and improve market efficiency.

These findings demonstrate that overconfident investors do not necessarily experience trading losses following bad news. In contrast to much of the traditional behavioral finance literature, which generally associates overconfidence with poor investment performance and excessive trading losses⁵⁷, the present study finds that highly overconfident investors may still obtain short-term profits under unfavorable market conditions, resulting in a transfer of wealth from low-overconfidence investors to highly overconfident investors. The novelty of this finding lies in its evidence from the Indonesian Islamic capital market, where highly overconfident investors appear capable of exploiting temporary market inefficiencies and pessimistic reactions from less confident investors during periods of uncertainty. This finding is partially consistent with noise trader theory, according to which the activities of irrational or less-informed traders may generate temporary price distortions and market inefficiencies, thereby creating short-lived opportunities for more informed market participants.⁵⁸ However, the findings also indicate that behavioral biases such as overconfidence remain influential even within Sharia-compliant financial environments that emphasize prudence and ethical investment principles. Therefore, while overconfident investors may occasionally benefit from short-term market sentiment, these gains are likely driven by temporary price distortions rather than superior fundamental analysis and may not be sustainable in the long run.

CONCLUSION

Our experimental investigation provides empirical support for behavioral finance theory and offers important insights into overconfident behavior in the Islamic capital market. The study contributes theoretically by extending the behavioral finance literature into the context of Sharia-compliant investment environments, demonstrating that overconfidence and self-deceptive behavior remain influential even in markets guided by ethical and prudential Islamic principles. The findings show that highly overconfident investors tend to

⁵⁷ Barber and Odean, 'Boys Will Be Boys: Gender, Overconfidence, and Common Stock Investment'.

⁵⁸ Joël Peress and Daniel Schmidt, "Glued to the TV: Distracted Noise Traders and Stock Market Liquidity," *The Journal of Finance* 75, no. 2 (2020): 1083–1133, <https://doi.org/10.1111/jofi.12863>.

overestimate the accuracy of their knowledge and information during pre-opening and bad-news sessions, resulting in larger average prediction errors than low-overconfidence investors. This behavior reflects the self-deception theory, where investors maintain excessive confidence in their personal judgments despite unfavorable information. Although highly overconfident investors often experience trading losses and wealth transfers to less overconfident investors, the study also reveals that they may occasionally obtain short-term profits when their predictions align closely with prevailing market sentiment. This finding highlights the role of collective investor behavior and temporary market inefficiencies in shaping price discovery within the Islamic capital market.

From a practical perspective, the study provides important implications for Sharia investment practices, investor education, and market regulation in Indonesia. The findings suggest that overconfidence may emerge as a response to limited information and uncertainty, encouraging investors to rely excessively on subjective beliefs rather than fundamental analysis. Therefore, Islamic financial institutions, brokerage firms, and capital market regulators should strengthen investor education programs by integrating behavioral finance awareness into Sharia investment literacy initiatives. Investor education should emphasize not only technical investment skills but also the importance of emotional control, risk awareness, and ethical decision-making consistent with Islamic financial principles. In addition, investment managers and brokers should encourage more prudent and long-term investment strategies to reduce speculative trading behavior driven by excessive confidence.

This study also has several limitations. First, the analysis only uses stock price predictions, trading profits and losses, and prediction errors as proxy variables for trading activity, while other important indicators such as bid-ask spreads, market depth, and additional behavioral variables are not included. Second, participants tended to prefer placing limit orders rather than executing trades at the best available bid or ask prices, which may influence market dynamics during the experiment. Third, the experiment required approximately four hours to complete, creating the possibility of maturation effects and behavioral changes unrelated to the experimental treatment. Future studies are therefore encouraged to incorporate broader behavioral measures, including over-placement and over-precision, in addition to overestimation calibration, to provide a more comprehensive understanding of overconfidence in Islamic capital markets.

Author's Contribution

Winda Rika Lestari contributed to the conceptualization of the study, literature review development, experimental design, data analysis, interpretation of results, and manuscript drafting.

Heru Wahyudi contributed to research supervision, methodology refinement, validation of the experimental framework, statistical analysis review, and critical revision of the manuscript for important intellectual content.

Edi Pranyoto, Arif Darmawan contributed to data collection, experimental implementation, interpretation of findings in the context of the Indonesian Sharia capital market, and final manuscript editing and proofreading. All authors have read and approved the final version of the manuscript and agreed to be accountable for all aspects of the work.

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Declaration of Competing Interest

The author declares that there is no conflict of interest.

Ethical Approval

Ethical approval No patient-identifying parts in this paper were used or known to the authors. Therefore, no ethical approval was requested.

REFERENCES

- Antonelli-Filho, Paulo, Aureliano Angel Bressan, Kelmara Mendes Vieira, and Ani Caroline Grigion Potrich. 'Sensation Seeking and Overconfidence in Day Traders: Evidence from Brazil'. *Review of Behavioral Finance* 13, no. 5 (2021): 486–501.
- Aziz, Saima, Shahid Mehmood, Muhammad Asif Khan, and Anita Tangl. 'Role of Behavioral Biases in the Investment Decisions of Pakistan Stock Exchange Investors: Moderating Role of Investment Experience'. *Investment Management & Financial Innovations* 21, no. 1 (2024): 146.
- Baker, H. Kent, Satish Kumar, and Nisha Goyal. 'Personality Traits and Investor Sentiment'. *Review of Behavioral Finance* 13, no. 4 (2021): 354–69.
- Barber, Brad M., and Terrance Odean. 'Boys Will Be Boys: Gender, Overconfidence, and Common Stock Investment'. *The Quarterly Journal of Economics* 116, no. 1 (2001): 261–92. <https://doi.org/10.1162/003355301556400>.
- Barber, Brad M., and Terrance Odean. 'Trading Is Hazardous to Your Wealth: The Common Stock Investment Performance of Individual Investors'. *SSRN Electronic Journal* LV, no. 2 (2001): 773–806. <https://doi.org/10.2139/ssrn.219228>.
- Begam, M. Rahila, Manivannan Babu, and MM Sulphey. 'Development and Validation of an Islamic Investor's Sentiment Scale for Stock Market Investment'. *Business Perspectives and Research* 12, no. 1 (2024): 26–44.
- Binnendyk, Jabin, and Gordon Pennycook. 'Individual Differences in Overconfidence: A New Measurement Approach'. *Judgment and Decision Making* 19 (2024): e28.
- Bloomfield, Robert, and Robert Libby. 'Market Reactions to Differentially Available Information in the Laboratory'. *Journal of Accounting Research* 34, no. 2 (1996): 183–207. <http://hdl.handle.net/10.2307/2491499>.
- Bloomfield, Robert, Robert Libby, and Mark W. Nelson. 'Confidence and the Welfare of Less-Informed Investors'. *Accounting, Organizations and Society* 24, no. 8 (1999): 623–47.
- Bouteska, Ahmed, Murad Harasheh, and Mohammad Zoynul Abedin. 'Revisiting Overconfidence in Investment Decision-Making: Further Evidence from the U.S. Market'. *Research in International Business and Finance* 66 (October 2023): 102028. <https://doi.org/10.1016/j.ribaf.2023.102028>.

- Budiman, Johny, Jason Yodiputra, Candy Candy, and Isnaini Nuzula Agustin. 'How Overconfidence and Mental Accounting Influence Investments? The Moderating Role of Financial Literacy'. *Asian Management and Business Review*, 2025, 1–18.
- Bushee, Brian J., Theodore H. Goodman, and Shyam V. Sunder. 'Financial Reporting Quality, Investment Horizon, and Institutional Investor Trading Strategies'. *The Accounting Review* 94, no. 3 (2019): 87–112.
- Cimon, David A. 'Broker Routing Decisions in Limit Order Markets'. *Journal of Financial Markets* 54 (2021): 100602.
- Daniel, Kent, and David Hirshleifer. 'Overconfident Investors, Predictable Returns, and Excessive Trading'. *Journal of Economic Perspectives* 29, no. 4 (2015): 61–88. <https://doi.org/10.1257/jep.29.4.61>.
- Daniel, Kent, David Hirshleifer, and Avanidhar Subrahmanyam. 'Investor Psychology and Security Market Under- and Overreactions'. *Journal of Finance* 53, no. 6 (1998): 1839–85. <https://doi.org/10.1111/0022-1082.00077>.
- Eyster, Erik, Matthew Rabin, and Dimitri Vayanos. 'Financial Markets Where Traders Neglect the Informational Content of Prices'. *The Journal of Finance* 74, no. 1 (2019): 371–99.
- Fauzi, Achmad. 'The Role of Sharia Financial Literacy in Moderating the Effect of Overconfidence on Generation Z Investment Decisions in the Indonesian Capital Market'. *JIA (Jurnal Ilmiah Akuntansi)* 10, no. 2 (2025): 248–61.
- Feiler, Daniel, and Jordan Tong. 'From Noise to Bias: Overconfidence in New Product Forecasting'. *Management Science* 68, no. 6 (2022): 4685–702.
- Gaar, Eduard, David Scherer, and Dirk Schiereck. 'The Home Bias and the Local Bias: A Survey'. *Management Review Quarterly* 72, no. 1 (2022): 21–57.
- Glaser, Markus, and Martin Weber. 'Overconfidence and Trading Volume'. *The Geneva Risk and Insurance Review* 32, no. 1 (2007): 1–36. <https://doi.org/10.1007/s10713-007-0003-3>.
- Glăveanu, Vlad Petre. *The Palgrave Encyclopedia of the Possible*. Springer, 2022.
- Glebkin, Sergei, and John Chi-Fong Kuong. 'When Large Traders Create Noise'. *Journal of Financial Economics* 150, no. 2 (2023): 103709.
- Gorzon, David, Marc Bormann, and Ruediger von Nitzsch. 'Measuring Costly Behavioral Bias Factors in Portfolio Management: A Review'. *Financial Markets and Portfolio Management* 38, no. 2 (2024): 265–95.
- Graham, John R., Campbell R. Harvey, and Hai Huang. 'Investor Competence, Trading Frequency, and Home Bias'. *SSRN Electronic Journal*, ahead of print, 2006. <https://doi.org/10.1287/mnsc.1090.1009>.
- Griffin, Dale, and Amos Tversky. 'The Weighing of Evidence and the Determinants of Confidence'. *Cognitive Psychology* 24, no. 3 (1992): 411–35.
- Gudjonsson, Gisli H. 'The Science-Based Pathways to Understanding False Confessions and Wrongful Convictions'. *Frontiers in Psychology* 12 (2021): 633936.
- Hidayat, Muhammad Syahrul, Supriyanto Supriyanto, and Nurul Mazidah. 'Ethnomethodology Approach in Investment Decision Making in Islamic

- Capital Market: An Interaction and Social Practice of Market Participants'. *Majapahit Journal of Islamic Finance and Management* 3, no. 2 (2023): 127–47.
- Hoffrage, Ulrich. 'Overconfidence'. *Cognitive Illusions*, 2022, 287–306.
- Huang, Jiayu, Yifan Wang, Yaojun Fan, and Hexuan Li. 'Gauging the Effect of Investor Overconfidence on Trading Volume from the Perspective of the Relationship between Lagged Stock Returns and Current Trading Volume'. *International Finance* 25, no. 1 (2022): 103–23.
- Isern-Mas, Carme, and Ivar R. Hannikainen. 'Self-Deception: A Case Study in Folk Conceptual Structure'. *Review of Philosophy and Psychology* 16, no. 2 (2025): 545–72.
- Kahneman, Daniel, and Amos Tversky. *Intuitive Prediction: Biases and Corrective Procedures*, in: *Judgment under Uncertainty*. Decisions and Designs Inc Mclean Va, 1977. <https://doi.org/10.1017/cbo9780511809477.031>.
- Kirchler, Erich, and Boris Maciejovsky. 'Simultaneous Over- and Underconfidence: Evidence from Experimental Asset Markets'. *Journal of Risk and Uncertainty* 25, no. 1 (2002): 65–85. <https://doi.org/10.1023/A:1016319430881>.
- Klayman, Joshua, Jack B. Soll, and Claudia Gonza. 'Overconfidence: It Depends on How, What, and Whom You Ask'. *Organizational Behavior and Human Decision Processes* 79, no. 3 (1999): 216–47. <https://doi.org/10.1006/obhd.1999.2847>.
- Kufepaksi, Mahatma. 'The Contribution of Self-Deceptive Behavior on Price Discovery, An Experimental Approach'. *Asia Pacific Management Review* 13, no. 1 (2007): 419–34. <https://doi.org/10.6126/APMR.2008.13.1.06>.
- Kufepaksi, Mahatma. 'The Contribution of Self-Deceptive Behavior on Price Discovery: An Experimental Approach'. *Asia Pacific Management Review* 13, no. 1 (2008): 419–34.
- Kumar, Jitender, and Neha Prince. 'Overconfidence Bias in Investment Decisions: A Systematic Mapping of Literature and Future Research Topics'. *FIIB Business Review*, 2023, 23197145231174344.
- Li, Changtai, Weihong Huang, Wei-Siang Wang, and Wai-Mun Chia. 'Price Change and Trading Volume: Behavioral Heterogeneity in Stock Market'. *Computational Economics* 61, no. 2 (2023): 677–713.
- Li, Sophia, Randall Hale, and Don A. Moore. 'Is Overconfidence an Individual Difference?' *Judgment and Decision Making* 20 (2025): e25.
- Lonkani, Ravi, Chuleeporn Changchit, Robert Cutshall, Alichia Treerotchananon, and Thanu Prasertsoontorn. 'The Effect of Investors' Emotional and Depressive States on Perceived Returns and Risk'. *Journal of Asian Business and Economic Studies* 32, no. 3 (2025): 134–46.
- Lu, Yuanzhu, Jinming Hu, and Yaxian Gong. 'Learning to Be Overconfident and Underconfident'. *The Singapore Economic Review* 68, no. 05 (2023): 1815–27.
- Maurya, Prince Kumar, Rohit Bansal, and Anand Kumar Mishra. 'Investor Sentiment and Its Implication on Global Financial Markets: A Systematic Review of Literature'. *Qualitative Research in Financial Markets* 18, no. 1 (2026): 209–48.
- Mejía, G. Mauricio. 'Theory-Driven or Theory-Informed? A Review of Behavioural Economics in Design'. *The Design Journal* 24, no. 4 (2021): 567–87.

- Möbius, Markus M., Muriel Niederle, Paul Niehaus, and Tanya S. Rosenblat. 'Managing Self-Confidence: Theory and Experimental Evidence'. *Management Science* 68, no. 11 (2022): 7793–817.
- Mushinada, Venkata Narasimha Chary. 'Are Individual Investors Irrational or Adaptive to Market Dynamics?' *Journal of Behavioral and Experimental Finance* 25 (2020): 100243.
- Nabeshima, Honoka, Mostafa Saidur Rahim Khan, and Yoshihiko Kadoya. 'Overconfidence and Investment Loss Tolerance: A Large-Scale Survey Analysis of Japanese Investors'. *Risks* 13, no. 8 (2025): 142.
- Naveed, Farrukh, and Hasniza Mohd Taib. 'Overconfidence Bias, Self-Attribution Bias and Investor Decisions: Moderating Role of Information Acquisition'. *Pakistan Journal of Commerce and Social Sciences (ISSN 1997-8553)* 15, no. 2 (2021): 354–377.
- Noor, Maheen, Dilawar Khan, Alam Khan, and Noman Rasheed. 'The Impact of Renewable and Non-Renewable Energy on Sustainable Development in South Asia'. *Environment, Development and Sustainability* 26, no. 6 (2024): 14621–14638.
- Peress, Joel, and Daniel Schmidt. 'Glued to the TV: Distracted Noise Traders and Stock Market Liquidity'. *The Journal of Finance* 75, no. 2 (2020): 1083–1133.
- Piehlmaier, Dominik M. 'The One-Man Show: The Effect of Joint Decision-Making on Investor Overconfidence'. *Journal of Consumer Research* 50, no. 2 (2023): 426–446.
- Ran, Qin, Xiangrui Chao, Francisco Javier Cabrerizo, and Enrique Herrera-Viedma. 'Managing Overconfidence Behaviors from Heterogeneous Preference Relations in Linguistic Group Decision Making'. *IEEE Transactions on Fuzzy Systems* 31, no. 7 (2022): 2435–2449.
- Reddy, Krishna, Muhammad Ali Jibrán Qamar, Nawazish Mirza, and Fangwei Shi. 'Overreaction Effect: Evidence from an Emerging Market (Shanghai Stock Market)'. *International Journal of Managerial Finance* 17, no. 3 (2021): 416–437.
- Satria, Rita, Nugraha Nugraha, Disman Disman, and Imas Purnamasari. 'Behavioral Biases in Islamic Retail Investing: The Moderating Role of Demographics'. *Share: Jurnal Ekonomi Dan Keuangan Islam* 14, no. 1 (2025): 494–515.
- Schwardmann, Peter, and Joel Van der Weele. 'Deception and Self-Deception'. *Nature Human Behaviour* 3, no. 10 (2019): 1055–61.
- Shleifer, Andrei. 'Inefficient Markets: An Introduction to Behavioral Finance'. In *Journal of Institutional and Theoretical Economics*, vol. 158. no. 2. Preprint, 2002. <https://doi.org/10.1628/0932456022975402>.
- Soll, Jack B., Asa B. Palley, Joshua Klayman, and Don A. Moore. 'Overconfidence in Probability Distributions: People Know They Don't Know, but They Don't Know What to Do about It'. *Management Science* 70, no. 11 (2024): 7422–7442.
- Trinugroho, Irwan, and Roy Sembel. 'Overconfidence and Excessive Trading Behavior: An Experimental Study'. *International Journal of Business and Management* 6, no. 7 (2011): 147–52. <https://doi.org/10.5539/ijbm.v6n7p147>.

- Ullah, Muhammad Asad, Naeem Bhojani, and Nayab Jumani. 'Investor Overconfidence in the AI Era: Human vs. Algorithmic Decision-Making'. *Journal of Social & Organizational Matters* 5, no. 1 (2026): 203–217.
- Umar, Muhammad, Nawazish Mirza, Syed Kumail Abbas Rizvi, and Mehreen Furqan. 'Asymmetric Volatility Structure of Equity Returns: Evidence from an Emerging Market'. *The Quarterly Review of Economics and Finance* 87 (2023): 330–336.
- Unhelkar, Bhuvan, Sudhanshu Joshi, Manu Sharma, Shiv Prakash, Ashwin Krishna Mani, and Mukesh Prasad. 'Enhancing Supply Chain Performance Using RFID Technology and Decision Support Systems in the Industry 4.0–A Systematic Literature Review'. *International Journal of Information Management Data Insights* 2, no. 2 (2022): 100084.
- Usman, Berto, Muhammad Geovani Hasnam, Ridwan Nurazi, Baihaqi, and Somnuk Aujirapongpan. 'Exploring Investor Attention in Shariah Markets, Macroeconomic Influences, and Corporate Performance: Insights from Indonesia'. *Social Sciences & Humanities Open* 10 (January 2024): 101015. <https://doi.org/10.1016/j.ssaho.2024.101015>.
- Wang, Ruohan, Jing Wang, and Zhi Yang. 'Analysis of Market Equilibrium Based on Overconfidence Behavior of Market Makers'. *PLoS One* 21, no. 2 (2026): e0335569.
- Wang, Zhaoqi, Daniel Friedman, and Thomas Bowen. 'Overconfidence and Market Performance'. *Journal of Behavioral Finance*, 2025, 1–16.
- Xiang, Kaiyu. 'Relationship between Positive Illusions, Psychological Resilience, and Subjective Well-Being in College Students: A New Attempt at Positive Psychology'. *Psychological Reports*, 2024, 00332941241269471.
- Yahya, Adibah, Azhar Affandi, Aldrin Herwani, Atang Hermawan, and Jaja Suteja. 'Herding Behavior in the Sharia Capital Market on Investment Decisions'. *JRAK* 16, no. 1 (2024): 107–118.
- Zahera, Syed Aliya, and Rohit Bansal. 'Do Investors Exhibit Behavioral Biases in Investment Decision Making? A Systematic Review'. *Qualitative Research in Financial Markets* 10, no. 2 (2018): 210–51. <https://doi.org/10.1108/QRFM-04-2017-0028>.