ISSN 1816-6075 (Print), 1818-0523 (Online)
Journal of System and Management Sciences
Vol. 14 (2024) No. 10, pp. 517-529
DOI:10.33168/JSMS.2024.1029

Enhancing Rational Investment Decisions: The Impact of Financial Literacy and Experience on Indonesian Retail Investors, Moderated by Overconfidence

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Abstract. This study investigates the influence of financial literacy and investment experience on rational investment decision-making among retail investors in Indonesia, with overconfidence as a moderating variable. A survey was conducted on a sample of 269 individual investors with at least one year of investment experience, and the data were analyzed using structural equation modeling (SEM-PLS). The results reveal that financial literacy and investment experience significantly affect rational investment decision-making. However, overconfidence weakened these relationships, suggesting that excessive confidence can lead to less rational decisions. The findings highlight the importance of promoting financial literacy and learning from experience while controlling overconfidence to enhance rational investment behavior. The study contributes to the literature on behavioral finance and provides practical implications for investors, financial educators, and policymakers in Indonesia.

Keywords: Financial Literacy, Experience Level, Overconfidence, Rational Stock Investment Decision Making

1. Introduction

The Indonesian stock market is witnessing substantial growth and diversification, propelled by various industries and solid economic expansion, positioning Indonesia as a significant player in Southeast Asia (Fernando, 2022). Infrastructure development and technological advancements further enhance investment opportunities, which is evident in the performance of related sectors. Government initiatives to improve market transparency and regulation have boosted investor confidence, making the stock market an attractive destination. However, retail investors encounter challenges such as high market volatility and limited access to investment education. Research indicates a perception of retail investors as inferior to institutional counterparts, with the latter viewed as more skilled due to better resources and information networks (Badhani et al., 2023). Institutional investors trade selectively, while retail investors, lacking information, evenly distribute investments across stocks (Li et al., 2017). Reliance on public information makes retail investors susceptible to public sentiment, whereas institutional investors react asymmetrically to market movements (Chuang & Susmel, 2011). Despite these challenges, Indonesia's number of individual investors has surged recently, leading to increased trading volume and heightened market activity (Chuang & Susmel, 2011; Fernando, 2022). This growth underscores the importance of retail investors understanding market dynamics and making informed investment decisions (Sachdeva et al., 2023).

Investments have a wide variety and will provide benefits when done with the right calculations. Therefore, every investor tries to make optimal investment decisions. Making investment decisions is conducting various research and analysis to calculate how profitable an investment decision is (Jagongo & Mutswenje, 2014). This process involves psychological and mental aspects that result in choosing an investment (Weixiang et al., 2022). Most economic and financial theories are based on the idea that market participants act rationally and consider all available information in making decisions (Al Mamun et al., 2015). However, several researchers have found many examples of irrational behavior in decision-making by investors (Mushinada, 2020; Siraji et al., 2021; Viryajaya & Handoyo, 2022). Although socio-psychological aspects are considered factors that determine economic decision-making by individuals (López-Cabarcos et al., 2020), other aspects also determine investment decision-making, two of which are financial literacy and experience factors (Raut, 2020).

Financial literacy and awareness are fundamental pillars in the decision-making process regarding economic projects, especially within developing nations where the implications of investment choices can be profound (Alshebami & Aldhyani, 2022). With a comprehensive understanding of financial principles, individuals are empowered to make informed and judicious investment decisions. By leveraging financial education and knowledge, investors can assess various critical factors, including prevailing market conditions, the intricacies of financial products, and the inherent risks associated with each opportunity (Abreu & Mendes, 2010). This sophisticated evaluation process enables investors to meticulously weigh potential returns against the accompanying risks, fostering a more calculated and prudent approach to investment. Consequently, armed with the insights garnered through financial literacy, individuals are better equipped to navigate the complexities of investment landscapes, ultimately positioning themselves for long-term financial success and contributing to the economic advancement of their nations.

Furthermore, the impact of experience on investment decisions is profound and undeniable (Nosfinger, 2005). Positive experiences, such as achieving profitable outcomes from investments, often instill confidence and a willingness to take on greater risks among investors. These successes may lead individuals to pursue more aggressive investment strategies for higher returns. Conversely, negative experiences, such as enduring financial losses, evoke a sense of caution and risk aversion. Investors encountering setbacks may adopt a more conservative approach, prioritizing capital preservation over potential gains. By providing individuals with the necessary knowledge and skills to understand and navigate investment landscapes, financial education empowers them to make informed decisions, regardless of their past experiences.

In investment decisions, numerous behavioral biases can significantly impact the process, and overconfidence stands out as a prominent example (Im & Oh, 2016). In an inherently uncertain investment landscape, investors often exhibit overconfidence, leading them to make decisions based on an exaggerated belief in their own abilities and knowledge (Pikulina et al., 2017). Financially literate investors may be particularly susceptible to this bias, as their understanding of financial concepts may bolster their confidence in their investment prowess. This heightened enthusiasm can drive them to pursue riskier investment opportunities for potentially high returns. However, overconfident investors may only partially understand the complexities involved in investment decisions, leading them to underestimate the likelihood of experiencing losses. Consequently, this overestimation of their capabilities and underestimation of risks can lead to behaviors such as excessive trading and the construction of overly aggressive, high-risk portfolios (Dangol & Manandhar, 2020).

Several studies have explored decision-making and integration with financial literacy, experience, and overconfidence. Studies conducted by (Suresh G., 2024) show that financial literacy has a significant effect on investment decision-making by individual investors in the stock market in India, Saudi Arabia (Seraj et al., 2022), and the United Arab Emirates (Hassan Al-Tamimi & Anood Bin Kalli, 2009). However, Kasoga (2021) found the opposite result: financial literacy did not significantly affect investment decision-making in the Tanzania Stock Market. The differences in research results indicate that other factors influence investment decision-making by individual investors in the Tanzania Stock Market, thus shifting financial literacy from factors that determine investors making investment decisions. Kasoga (2021) revealed that one of these factors is probably cultural. Almansour et al. (2023) stated that investment experience is a supplier of information for investors, and according to traditional financial theory, investors will make rational decisions when they have complete information. Investment experience is investors' perception regarding their success or failure in investing in the past and is a factor that influences investment decision-making in the future (Ismiyanti & Mahadwartha, 2020). Jarvis (2012) states that experience is built from interactions between natural, personal and social elements in human life, which are proactive and reactive and are related to the learning process in humans. In line with that, Fazey et al. (2005) stated that humans learn from their experiences and use the knowledge gained from these experiences to behave and behave in the future. The experience becomes the basis for investors to consider various investment risks to make decisions more rational (Lin, 2011). It explains the research results that investment experience has a positive and significant effect on making rational investment decisions. Wan et al. (2022) found that overconfidence occurs in individual investors with high and low financial literacy. Overconfidence in investors with high or good financial literacy will cause them to be more tolerant of risk, encouraging them to make higher-risk decisions to pursue opportunities for greater profits (Pikulina et al., 2017). It is in line with Sudirman et al. (2023), who found that risk tolerance mediates the influence of overconfidence on making irrational investment decisions. Seraj et al. (2022), which show the moderating role of overconfidence on the influence of financial literacy on investment decision-making, also shows that the moderating role is weakening, referring to the correlation coefficient obtained, which is smaller than the direct influence of financial literacy on investment decision making. Metwally (2023) confirms this through his findings, namely that overconfidence is a behavioral bias that distorts individual investors' rationality of investment decisions. The results were shown by Adil et al. (2022), who found that there was no significant influence of overconfidence on investment decision-making by individual investors, and Trisnowati et al. (2023), who found that investment experience does not have a significant effect on investment decision making by individual investors. When the two research results are combined, it indicates that overconfidence does not moderate the influence of investment experience on investment decision-making by individual investors.

Based on the explanation above, further studies must identify a comprehensive exploration of the interplay between financial literacy, experience, and overconfidence in investment decision-making. The study delves into various aspects, including how financial literacy empowers individuals to make

informed investment decisions, the profound impact of experience on investor behavior, and the presence of overconfidence as a behavioral bias affecting decision-making processes. Additionally, this study incorporates findings from studies conducted in different countries, highlighting the variability in the influence of financial literacy and experience on investment decisions across diverse market contexts. Furthermore, the discussion on the moderating role of overconfidence adds depth to the analysis, highlighting its nuanced impact on the relationship between financial literacy, experience, and investment decision-making. The study contributes to the literature on behavioral finance and provides practical implications for investors, financial educators, and policymakers in Indonesia.

2. Literature Review

Financial literacy is the skills, knowledge, and understanding of individuals' basic financial concepts, principles, and calculations (Jariwala, 2015). Financial literacy is also defined as understanding financial concepts and having the ability and confidence to manage personal finances through appropriate short-term and long-term financial planning, considering life events and changing economic conditions (Ateş et al., 2016). Investors' financial literacy impacts rational decision-making by considering the investment results they will obtain (Jiang et al., 2020). A person with higher financial literacy can reflect in financial behavior and investment decisions with better predictability, such as rational stock investment decision-making that follows a logical path, including procedures for identifying demand, searching for information, and evaluating alternatives (Lin, 2011).

Investors rely on a variety of information before investing. Past investment experiences provide much information for investors because the human brain stores excellent and bad experiences through a process and records various features of these experiences (Sabir et al., 2019). Investors with much investment experience indicate they can make more rational transaction decisions than less experienced investors (Rzeszutek et al., 2015). Similarly, investors who have a long period of investing will tend to avoid making mistakes because these investors have accumulated investment experience, so investors learn to be more rational (Chen et al., 2007), supported by the results of several studies which found that experience positively and significantly affects investment decision making (Awais et al., 2016; Lan et al., 2018; Roszkowski & Davey, 2010).

Overconfidence is a biased aspect that can influence investment decisions (Jan et al., 2022), making individuals ignore the risks associated with investments because they feel more competent and more knowledgeable, so when they predict an event, they consider it something specific (Pikulina et al., 2017). Overconfident people ignore the available evidence because they are confident in their abilities and knowledge. They are so confident in their views that they ignore important information when making investment decisions (Eichholtz & Yönder, 2015). Chu et al. (2012) found that overconfident investors were involved in stock transactions that hurt returns. McCannon et al. (2016) found that overconfident investors make risky investment decisions. Similarly, Breuer et al. (2014) stated that with high overconfidence, investors will be bolder when allocating funds to high-risk assets, even though the results are not always profitable. Overconfident investors take insufficient time to realize profits and hold onto shares that experience losses.

This study examined the following hypotheses:

H1: Financial literacy significantly positively affects rational stock investment decisions.

H2: The experience level significantly positively affects rational stock investment decisions.

H3: Overconfidence weakens the influence of financial literacy on rational stock investment decisions.

H4: Overconfidence weakens the influence of experience level on rational stock investment decisions.

3. Research Methodology

The method used in this research is a survey method. According to Neuman (2003), survey research is quantitative research in which researchers ask several people (respondents) about beliefs, opinions, and characteristics of an object and past or present behavior. Rational stock investment decisions are

measured using indicators adapted from Kumar and Goyal (2016) and Lin (2011). Financial literacy is measured using a performance test tool consisting of 15 questions, including knowledge of basic financial concepts, basic calculation skills, and understanding of principles and basic financial concepts, adopted from Jariwala (2015). Experience level is measured based on the length of investing experience. Meanwhile, overconfidence is measured using indicators adapted from Lin (2011).

Data was collected by questionnaire from 269 individual investors in Indonesia using a purposive sampling method. The characteristics of the respondents can be seen in Table 1. The questionnaire was given directly to respondents who filled it out by self-report. The analysis technique used in this research is PLS-SEM, which refers to the steps described by Hair et al. (2017). The collected data is tabulated in Microsoft Excel and then processed using Smart-PLS. Data processing follows the research model as shown in Figure 1.

Table 1. Respondent Characteristics

No.	Characteristics	Numbers	Percentage (%)
1.	Age		
	- 20 to 24 years old	32	11.90
	- 25 to 29 years old	113	42.01
	- 30 to 34 years old	78	29.00
	- 35 to 40 years old	36	13.38
	- 41 to 45 years old	10	3.72
2.	Gender		
	- Men	113	42.01
	- Woman	156	57.99
3.	Domicile		
	- Java	170	63.20
	- Bali & Nusa Tenggara	25	9.29
	- Sumatera	51	18.96
	- Sulawesi	21	7.81
	- Kalimantan	2	0.74
4.	Occupation		
	- Employee	154	57.25
	- Businessman	77	28.62
	- Students	23	8.55
	- Housewife	15	5.58
5.	Education		
	- High School	35	13.01
	- Diploma I-III	30	11.15
	- Bachelor/Diploma IV	200	74.35
	- Masters	3	1.12
	- Doctor	1	0.37
6.	Income per month		
	- less than 1 million rupiah	3	1.12
	- 1 to 5 million rupiah	103	38.29
	- 5 to 10 million rupiah	109	40.52
	- More than 10 million rupiah	54	20.07

Source: Data process

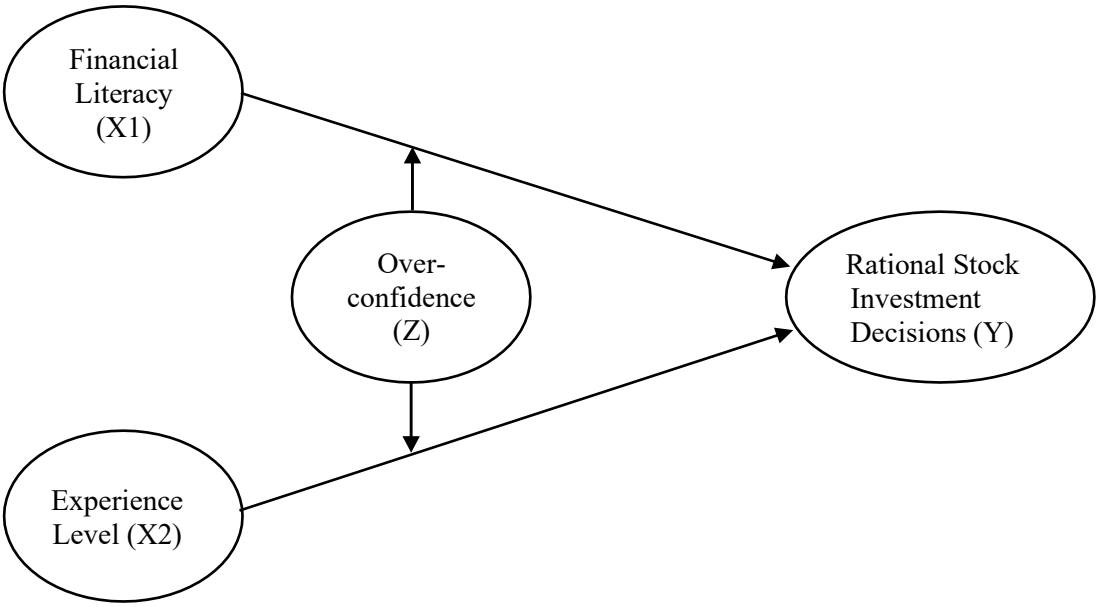

Fig. 1: Research Model

4. Result and Discussion

4.1. Result

All indicators in the questionnaire have an outer loading > 0.7, and all constructs have an AVE > 0.5. Thus, the model in this research has good construct validity. The AVE square root value of each construct in this research model is greater than the correlation value between constructs, and all correlations between constructs in the model have an HTMT value <0.85. Thus, the model has good discriminant validity. All constructs in the model have composite reliability values > 0.7. Thus, the model has good construct reliability.

Structural model evaluation was conducted to determine multicollinearity problems and measure the relationship's significance between constructs. The requirement for structural model testing is that there are no multicollinearity problems in the model. All predictor constructs in the model have inner VIF values < 5. Thus, the model does not have multicollinearity problems. The significance of the relationship between constructs is known through the bootstrapping process of research data, which produces t-values and p-values. When the t-values exceed the critical value, the path coefficient explains a significant relationship between two constructs at a predetermined error level. In this research, the test carried out was a two-tailed test with an error rate of 5%, so the critical value was 1.96. A relationship is significant if it has t-values > 1.96. Table 2 shows the test results.

Table 2. Test Results

Relationship Between Constructs	***Path Coefficient***	***t-values***	***p-values***
X1 → Y	0.076	2.283	0.023
X2 → Y	0.075	2.872	0.004
Z moderation on X1 → Y	0.052	2.084	0.038

Z moderation on X2 → Y	0.052	1.993	0.047

Source: Data process

The test results in Table 2 show that all relationships between constructs in the model have p-values < 0.05 and t-values > 1.96. These results explain that financial literacy and experience significantly influence rational investment decision-making, both directly and when moderated by overconfidence. Based on the path coefficient values obtained, it is known that all of these relationships are positive. Thus, H1 and H2 are accepted.

Whether overconfidence strengthens or weakens both the influence of financial literacy and level of experience on rational investment decision-making is known based on the path coefficient value. The path coefficient value on the influence of financial literacy on rational investment decision-making is 0.076. Meanwhile, when moderated by overconfidence, the path coefficient value of this relationship is smaller (0.052). Likewise, the path coefficient value on the influence of experience level on rational investment decision-making is 0.075. Meanwhile, when moderated by overconfidence, the path coefficient value of this relationship is smaller (0.052). Thus, overconfidence weakens both the influence of financial literacy and level of experience on rational investment decision-making, which means that H3 and H4 are accepted.

4.2. Discussion

Financial literacy significantly positively affects rational stock investment decisions

This research shows that financial literacy has a positive and significant influence on making rational investment decisions. Rational decision-making is a structured, logical, integrated thinking process that aims to achieve efficient and optimal results (Kumar & Goyal, 2016). Humans need cognitive abilities to be rational because rational decision-making involves considering a series of alternatives from different scenarios before choosing an option. In contrast, cognitive abilities are the main determinant of financial literacy (Muñoz-Murillo et al., 2020). The results obtained by this study confirm this explanation and underscore the pivotal role of financial literacy in shaping rational investment decisions. With a solid understanding of financial concepts and principles, individuals are better equipped to navigate the complexities of investment options, assess risks, and weigh potential returns with greater clarity. This heightened financial awareness enables investors to make informed choices that align with their financial goals and risk preferences. Individuals with higher levels of financial literacy tend to make more rational decisions regarding investing. The rationale behind this assertion is that financial literacy enhances cognitive abilities, enabling individuals to engage in structured, logical, and integrated thinking processes necessary for rational decision-making. The results of this research can also be explained from a behavioral finance perspective, especially regarding investor behavior toward risk. According to Nosfinger (2005), financial decision-making is influenced by emotional and cognitive factors, including dealing with risk. Risk arises due to the lack of certainty in the future. In making rational investment decisions, all investment risks must be identified and considered so that the investment decisions result from careful consideration, namely choosing investments with a greater chance of generating profits than generating losses (Virlics, 2013). Virlics' (2013) explanation confirms the theory of financial behavior that cognitive aspects influence financial decision-making. Their financial literacy illustrates the cognitive aspect of investors. This aligns with the empirical results of Bayar et al. (2020), which implies that investors need financial literacy to identify and analyze investment risks. The higher an investor's financial literacy, the more rational he or she will be in making investment decisions (Alshebami & Aldhyani, 2022). Traditional financial theory assumes that investors make rational decisions with complete information (Almansour et al., 2023). Information or knowledge is one element of financial literacy apart from behavior and attitudes (Kadoya & Khan, 2020). Financial literacy describes the cognitive aspects investors use to optimize the processing of investment-related information (Baihaqqy, Disman, et al., 2020), which means that by using their financial literacy, investors can produce new information based on available data or information. The research results of Adil et al. (2022) strengthened this explanation after finding that information

produced through financial literacy could overcome behavioral biases so that investors make decisions rationally. Thus, the results of this research confirm traditional financial theory, namely that financial literacy has a positive and significant effect on making rational investment decisions because financial literacy is the capital of investors' ability to process available data and information to produce information to be used as consideration in making investment decisions. Through these various considerations, investment decision-making becomes more rational.

This research's results align with the results obtained by several previous studies. These studies found that financial literacy has a significant effect on investment decision-making by individual investors on the stock market in India (Suresh G., 2024), Saudi Arabia (Seraj et al., 2022), and in the United Arab Emirates (Hassan Al-Tamimi & Anood Bin Kalli, 2009). However, Kasoga (2021) found the opposite result: financial literacy did not significantly affect investment decision-making in the Tanzania Stock Market. The differences in research results indicate that other factors influence investment decision-making by individual investors in the Tanzania Stock Market, thus shifting financial literacy from factors that determine investors making investment decisions. Kasoga (2021) revealed that one of these factors is probably cultural.

The experience level significantly positively affects rational stock investment decisions

This research shows that investment experience has a positive and significant influence on making rational investment decisions. Investment experience is investors' perception regarding their success or failure in investing in the past and is a factor that influences investment decision-making in the future (Ismiyanti & Mahadwartha, 2020). Jarvis (2012) states that experience is built from interactions between natural, personal and social elements in human life, which are proactive and reactive and are related to the learning process in humans. In line with that, Fazey et al. (2005) stated that humans learn from their experiences and use the knowledge gained from these experiences to behave and behave in the future. Thus, investment experience is a supplier of information for investors, and according to traditional financial theory, investors will make rational decisions when they have complete information (Almansour et al., 2023). The experience becomes the basis for investors to consider various investment risks to make decisions more rational (Lin, 2011). It explains the research results that investment experience has a positive and significant effect on making rational investment decisions. The results of this research that the level of experience has a positive and significant influence on rational investment decision-making can also be explained through heuristic theory, which states that decisions made amidst complexity and conditions of uncertainty are largely based on beliefs regarding the possibility of uncertain events (Tversky & Kahneman, 1974). Investors face various risks arising from uncertainty and complex conditions. Through experience, investors can gain an overview and knowledge of the possibilities in a situation they face. It can continue to become a source of confidence for investors. Waheed and Waseem (2023) support this by stating that experiential learning creates adaptive competence, strong decision-making abilities, self-confidence and problem-solving abilities, expert learning, generative competence, strengthening experience, and professional grooming.

The results of this research align with Mak & Ip (2017), who found that their past investment experiences drove investment decision-making by individual investors in China and Hong Kong. Yuliani and Nurwulandari (2023) also obtained the same results and found that individual student investors' investment experience influenced investment decision-making. Likewise, Aslam et al. (2020) found that investment experience significantly influenced investment decision-making by individual investors in Lahore, Pakistan. However, Raut (2020) found different results, revealing no relationship between past investment experience and future investment decision-making by individual investors in the Indian Stock Market. The difference in results is probably caused by each investor having a different experience level because each person may need help to optimally learn from their experience (Fazey et al., 2005). Thus, when investors cannot take lessons from their past investment experiences, these experiences will not influence their investment decision-making in the future.

Overconfidence weakens the influence of financial literacy on rational stock investment decisions

This research indicates that overconfidence weakens financial literacy's influence on rational investment decision-making. These results align with Plous' (1993) explanation that decision-making means choosing between several alternative options, and for someone to make a decision rationally, he must have logical and strong considerations. However, too self-confident individuals tend to overestimate their abilities, resulting in underestimating various alternative options and ignoring new information, making their decision-making less rational. Dangol and Manandhar (2020) strengthen this opinion by stating that overconfident individuals only have half the correct knowledge and information about investment decisions. Overconfident individuals underestimate the uncertainty that triggers the risk of loss. Moreover, being overconfident is a behavioral bias that sometimes causes investment decisions to go wrong (Chu et al., 2012). Wan et al. (2022) found that overconfidence occurs in individual investors with high and low financial literacy. Overconfidence in investors with high or good financial literacy will cause them to be more tolerant of risk, encouraging them to make higher-risk decisions to pursue opportunities for greater profits (Pikulina et al., 2017). It is in line with Sudirman et al. (2023), who found that risk tolerance mediates the influence of overconfidence on making irrational investment decisions. These findings can mean that overconfidence is a bias that can cause investors to make decisions less rationally even though the investor has adequate financial literacy. An overconfident attitude makes investors dare to take higher risks even though, according to their knowledge, the chance of experiencing losses is also high.

This study's results are the same as those obtained by Seraj et al. (2022), which show the moderating role of overconfidence on the influence of financial literacy on investment decision-making obtained also shows that the moderating role is weakening, referring to the correlation coefficient obtained which is smaller than the direct influence of financial literacy on investment decision making. However, the results of this study are not in line with Pikulina et al. (2017) and Ayaa et al. (2022), who argue that overconfidence strengthens the influence of financial literacy on investment decision-making. This difference may occur because, in this research, the investment decision-making studied is determined by rational investment decision-making.

Overconfidence weakens the influence of experience level on rational stock investment decisions

The results of this study indicate that overconfidence weakens the influence of investment experience on rational investment decision-making. These results can be explained through the overconfidence bias theory, which states that overconfidence is a bias that makes people believe they are better than their actual abilities (Shefrin, 2007). Overconfidence is also a bias that can influence investment decision-making (Ahmad & Shah, 2022). Overconfident investors assume they have more knowledge than they have, resulting in them ignoring and contradicting the available information. Thus, overconfidence becomes a factor that reduces the rationality of experienced investors, who lack adequate information from their experience in making investment decisions. Asri (2015) supports this by stating that overconfidence reflects irrational behavior because decisions taken by overconfident individuals are not based on the principle of normative rationality, which refers to the highest expected utility. Experience is a source of information and forms investors' knowledge, which they use to consider various investment risks to make their decisions more rational (Lin, 2011). However, investors who are knowledgeable and experienced in investing are often plagued by an attitude of overconfidence, which causes investors to neglect choosing investments that they consider low risk and prefer investments that have a higher risk because they are driven by the desire to obtain greater profits (Wan et al., 2022). Their knowledge and experience give investors high self-confidence and tend to be excessive, so investors think their decisions will produce profits in the future (Halim & Pamungkas, 2023). Metwally (2023) confirms this through his findings, namely that overconfidence is a behavioral bias that distorts individual investors' rationality of investment decisions.

The results of this study are in line with Kansal & Singh (2018) and Parveen et al. (2020), who found that overconfidence has a negative influence on investment decision-making by individual investors because overconfidence is a behavioral bias that makes investors less rational in making investment decisions, resulting in bad decisions. Shah et al. (2018) also found similar results that overconfidence has a negative influence on investment decision-making by individual investors in the Pakistan Stock Market, which can be interpreted as an attitude of overconfidence causing investors to ignore the knowledge and information obtained through their experience so that the investment decisions taken by investors become less rational. However, different results were shown by Adil et al. (2022), who found that there was no significant influence of overconfidence on investment decision-making by individual investors, and Trisnowati et al. (2023), who found that investment experience does not have a significant effect on investment decision making by individual investors. When the two research results are combined, it indicates that overconfidence does not moderate the influence of investment experience on investment decision-making by individual investors.

5. Conclusion

This study provides empirical evidence on the influence of financial literacy and investment experience on rational investment decision-making among retail investors in Indonesia, with overconfidence as a moderating factor. The findings confirm the positive effects of financial literacy and experience on rational decision-making, consistent with behavioral finance theories and previous studies. However, the study also highlights the detrimental role of overconfidence in weakening these relationships, emphasizing the need for investors to control their biases and rely on objective information and analysis. The study contributes to the growing literature on investment behavior in emerging markets and offers practical insights for investors, financial educators, and policymakers. Future research could explore the role of other behavioral biases, investigate the effectiveness of financial literacy interventions, and examine the influence of cultural and institutional factors on investment decision-making in Indonesia. By promoting financial literacy, encouraging learning from experience, and mitigating the effects of overconfidence, retail investors can enhance their decision-making processes and improve their investment outcomes in the Indonesian stock market.

References

Adil, M., Singh, Y., & Ansari, Mohd. S. (2022). How financial literacy moderate the association between behaviour biases and investment decision? Asian Journal of Accounting Research, 7(1), 17–30. https://doi.org/10.1108/AJAR- 09-2020-0086

Ahmad, M., & Shah, S. Z. A. (2022). Overconfidence heuristic-driven bias in investment decision-making and performance: mediating effects of risk perception and moderating effects of financial literacy. Journal of Economic and Administrative Sciences, 38(1), 60–90. https://doi.org/10.1108/JEAS-07-2020-0116

Almansour, B. Y., Elkrghli, S., & Almansour, A. Y. (2023). Behavioral finance factors and investment decisions: A mediating role of risk perception. Cogent Economics & Finance, 11(2). https://doi.org/10.1080/23322039.2023.2239032

Alshebami, A. S., & Aldhyani, T. H. H. (2022). The Interplay of Social Influence, Financial Literacy, and Saving Behaviour among Saudi Youth and the Moderating Effect of Self-Control. Sustainability, 14(14), 8780. https://doi.org/10.3390/su14148780

Aslam, M., Gulzar, M. F., Shahzad, M. A., Maqbool, M., & Chaudhary, M. H. (2020). Impact of Financial Knowledge and Investment Experience on Investment Decision Making with and without Risk Tolerance Mediation. Enterprise Risk Management, 6(1), 1. https://doi.org/10.5296/erm.v6i1.16930 Asri, M. (2015). Keuangan Perilaku. BPFE.

Ayaa, M. M., Peprah, W. K., Mensah, M. O., Owusu-Sekyere, A. B., & Daniel, B. (2022). Influence of Heuristic Techniques and Biases in Investment Decision- Making: A Conceptual Analysis and Directions for Future Research. International Journal of Academic Research in Business and Social Sciences, 12(5). https://doi.org/10.6007/IJARBSS/v12-i5/13339

Bayar, Y., Sezgin, H. F., Öztürk, Ö. F., & Şaşmaz, M. Ü. (2020). Financial Literacy and Financial Risk Tolerance of Individual Investors: Multinomial Logistic Regression Approach. SAGE Open, 10(3), 215824402094571. https://doi.org/10.1177/2158244020945717

Chu, W., Im, M., & Jang, H. (2012). Overconfidence and emotion regulation failure: How overconfidence leads to the disposition effect in consumer investment behaviour. Journal of Financial Services Marketing, 17(1), 96– 116. https://doi.org/10.1057/fsm.2012.7

Dangol, J., & Manandhar, R. (2020). Impact of Heuristics on Investment Decisions: The Moderating Role of Locus of Control. Journal of Business and Social Sciences Research, 5(1), 1–14. https://doi.org/10.3126/jbssr.v5i1.30195

Fazey, I., Fazey, J. A., & Fazey, D. M. A. (2005). Learning More Effectively from Experience. Ecology and Society, 10(2). http://www.jstor.org/stable/26267749

Halim, R., & Pamungkas, A. S. (2023). The Influence of Risk Perception, Overconfidence, and Herding Behavior on Investment Decision. International Journal of Application on Economics and Business, 1(1), 521– 529. https://doi.org/10.24912/ijaeb.v1i1.521-529

Hassan Al‐Tamimi, H. A., & Anood Bin Kalli, A. (2009). Financial literacy and investment decisions of UAE investors. The Journal of Risk Finance, 10(5), 500‐516. https://doi.org/10.1108/15265940911001402

Ismiyanti, F., & Mahadwartha, P. A. (2020). Investor Experience and Expectation towards Decision-Making Process. International Journal of Innovation, Creativity and Change, 12(8), 110–130.

Jarvis, P. (2012). An Analysis of Experience in the Processesof Human Learning. Recherche & Formation, 70, 15–30. https://doi.org/10.4000/rechercheformation.1916

Kadoya, Y., & Khan, M. S. R. (2020). What determines financial literacy in Japan? Journal of Pension Economics and Finance, 19(3), 353–371. https://doi.org/10.1017/S1474747218000379

Kansal, P., & Singh, S. (2018). Determinants of overconfidence bias in Indian stock market. Qualitative Research in Financial Markets, 10(4), 381–394. https://doi.org/10.1108/QRFM-03-2017-0015

Kasoga, P. S. (2021). Heuristic biases and investment decisions: multiple mediation mechanisms of risk tolerance and financial literacy—a survey at the Tanzania stock market. Journal of Money and Business, 1(2), 102–116. https://doi.org/10.1108/JMB-10-2021-0037

Kumar, S., & Goyal, N. (2016). Evidence on rationality and behavioural biases in investment decision making. Qualitative Research in Financial Markets, 8(4), 270–287. https://doi.org/10.1108/QRFM-05-2016-0016

Lin, H.-W. (2011). Elucidating rational investment decisions and behavioral biases: Evidence from the Taiwanese stock market . African Journal of Business Management, 5(5).

Mak, M. K., & Ip, W. (2017). An exploratory study of investment behaviour of investors. International Journal of Engineering Business Management, 9, 184797901771152. https://doi.org/10.1177/1847979017711520

Metwally, A. H. (2023). The Effect of Overconfidence Bias on Investors Decisions in the Egyptian Stock Market: The Role of Information Acquisition. Journal of Alexandria University for Administrative Sciences, 60(2), 47–85. https://doi.org/10.21608/acj.2023.294144

Muñoz-Murillo, M., Álvarez-Franco, P. B., & Restrepo-Tobón, D. A. (2020). The role of cognitive abilities on financial literacy: New experimental evidence. Journal of Behavioral and Experimental Economics, 84, 101482. https://doi.org/10.1016/j.socec.2019.101482

Nosfinger, J. R. (2005). Psychologi of Investing (2nd ed.). Precentice-Hall Inc.

Parveen, S., Satti, Z. W., Subhan, Q. A., & Jamil, S. (2020). Exploring market overreaction, investors' sentiments and investment decisions in an emerging stock market. Borsa Istanbul Review, 20(3), 224–235. https://doi.org/10.1016/j.bir.2020.02.002

Pikulina, E., Renneboog, L., & Tobler, P. N. (2017). Overconfidence and investment: An experimental approach. Journal of Corporate Finance, 43, 175–192. https://doi.org/10.1016/j.jcorpfin.2017.01.002

Plous, S. (1993). The Psychology of Judgment and Decision Making. McGraw- Hill.

Raut, R. K. (2020). Past behaviour, financial literacy and investment decision- making process of individual investors. International Journal of Emerging Markets, 15(6), 1243–1263. https://doi.org/10.1108/IJOEM-07-2018-0379

Seraj, A. H. A., Alzain, E., & Alshebami, A. S. (2022). The roles of financial literacy and overconfidence in investment decisions in Saudi Arabia. Frontiers in Psychology, 13. https://doi.org/10.3389/fpsyg.2022.1005075

Shah, S. Z. A., Ahmad, M., & Mahmood, F. (2018). Heuristic biases in investment decision-making and perceived market efficiency. Qualitative Research in Financial Markets, 10(1), 85–110. https://doi.org/10.1108/QRFM-04-2017-0033

Shefrin, H. (2007). Behavioral Finance: Biases, Mean–Variance Returns, and Risk Premiums. CFA Institute Conference Proceedings Quarterly, 24(2), 4–12. https://doi.org/10.2469/cp.v24.n2.4700

Sudirman, W. F. R., Winario, M., Priyatno, A. M., & Assyifa, Z. (2023). Risk Tolerance: Heuristic Bias Towards Investment Decision Making. Jurnal Manajemen Teori Dan Terapan | Journal of Theory and Applied Management, 16(2), 266–279. https://doi.org/10.20473/jmtt.v16i2.47471

Suresh G. (2024). Impact of Financial Literacy and Behavioural Biases on Investment Decision-making. FIIB Business Review, 13(1), 72–86. https://doi.org/10.1177/23197145211035481

Trisnowati, Y., Achsani, N. A., Sembel, R., & Andati, T. (2023). Investment Decision in Indonesia Stock Exchange: The Demographic of Environmental, Social, and Governance Investors. Indonesian Journal of Sustainability Accounting and Management, 7(1). https://doi.org/10.28992/ijsam.v7i1.699

Tversky, A., & Kahneman, D. (1974). Judgment under Uncertainty: Heuristics and Biases. Science, 185 (4157), 1124–1131. https://doi.org/10.1126/science.185.4157.1124

Virlics, A. (2013). Investment Decision Making and Risk. Procedia Economics and Finance, 6, 169–177. https://doi.org/10.1016/S2212-5671(13)00129-9

Waheed, M., & Waseem, A. (2023). Exploring the Role of Experiential Learning on Individual Adaptive Competencies. Vision: The Journal of Business Perspective. https://doi.org/10.1177/09722629231169111

Wan, L., Li, R., & Chen, Y. (2022). Negative performance feedback and corporate venture capital: The moderating effect of CEO overconfidence. Applied Economics, 54(16), 1829–1843. https://doi.org/10.1080/00036846.2021.1982133

Yuliani, D., & Nurwulandari, A. (2023). The Influence of Financial Literacy, Investment Experience, and Overconfidence on Investment Decisions in National University Master of Management Study

Program Students with Risk Tolerance as an Intervening Variable. International Journal of Social Service and Research, 3(10), 2399–2411. https://doi.org/10.46799/ijssr.v3i10.548