

The Influence of Financial Literacy on Investment Decision-Making with Herding Behavior and Loss Aversion as Moderating Variables

Dhiya Mufidah Erya Kamila ¹, Lisa Martiah Nila Puspita.²

¹² Universitas Bengkulu, Indonesia

Email: dhiyamufidah.e.k@gmail.com¹, lisa_mnp@unib.ac.id²

Article history

Submitted: 2026/07/20; Revised: 2026/07/21; Accepted: 2026/07/25

Abstract

This study aims to analyze the influence of financial literacy on investment decision-making among Generation Z in Bengkulu Province, with herding behavior and loss aversion serving as moderating variables. The research employs a quantitative approach with an associative design. Data were collected through questionnaires administered to 133 Generation Z respondents who had experience investing in the capital market, and after outlier detection and data cleaning, 124 valid responses were analyzed using multiple linear regression and Moderated Regression Analysis (MRA) with SPSS version 27. The findings reveal that financial literacy has a positive and significant effect on investment decision-making, while herding behavior and loss aversion negatively moderate this relationship, indicating that higher levels of these behavioral biases weaken the positive influence of financial literacy on the quality of investment decisions. These results suggest that although financially literate investors tend to make more rational investment decisions, the effectiveness of financial knowledge may be reduced when investors are strongly influenced by the tendency to follow others or by excessive fear of potential losses. This study contributes to the development of Behavioral Finance Theory by providing empirical evidence that behavioral biases can diminish the role of financial literacy in shaping rational investment decisions among young investors. Furthermore, the findings offer practical implications for policymakers, educational institutions, and financial service providers in designing more effective financial literacy programs that not only enhance financial knowledge but also address behavioral biases, particularly among Generation Z in regional areas.

Keywords

Financial Literacy, Investment Decision-Making, Generation Z, Herding Behaviour, Loss Aversion, Behavioral Finance.



© 2026 by the authors. Submitted for possible open access publication under the terms and conditions of the Creative Commons Attribution 4.0 International (CC BY SA) license, <https://creativecommons.org/licenses/by-sa/4.0/>.

INTRODUCTION

Financial literacy has become a key determinant of investment behavior in the modern financial environment. The rapid growth of financial technology, digital investment platforms, and accessible financial products has encouraged greater

participation in capital markets. However, many retail investors still lack sufficient knowledge of financial concepts, risk management, and investment strategies, leading them to rely on intuition, emotions, or social influence rather than rational analysis. Financial literacy enables individuals to evaluate investment alternatives, understand risks and returns, and make informed decisions that support long-term financial well-being (Lusardi & Mitchell, 2023; OECD, 2023).

Investment decision-making is influenced not only by economic information but also by psychological factors. Behavioral finance explains that investors often deviate from rational decision-making due to cognitive biases such as herding behavior and loss aversion. Herding behavior encourages investors to imitate others instead of relying on independent analysis, while loss aversion causes individuals to fear losses more than they value equivalent gains. These biases can reduce the positive impact of financial literacy, particularly during periods of market uncertainty (Kahneman et al., 2021; Baker et al., 2023).

The expansion of online trading platforms, social media, and digital investment communities has increased financial inclusion but also amplified exposure to speculative behavior and collective decision-making. Many investors are influenced by viral trends, online discussions, and influencer recommendations rather than objective financial analysis. Consequently, financial literacy alone may not ensure rational investment decisions unless investors are also able to manage behavioral biases such as herding behavior and loss aversion (Barberis, 2023; World Bank, 2022).

Previous studies generally report that financial literacy positively influences investment decision-making, portfolio diversification, and long-term financial performance. However, empirical findings remain inconsistent because psychological and social factors frequently weaken the effectiveness of financial knowledge. These inconsistencies suggest that herding behavior and loss aversion may act as moderating variables that influence the relationship between financial literacy and investment decisions, thereby providing a broader understanding of investor behavior (Xia et al., 2023; Hasan et al., 2024).

Based on these considerations, this study examines the effect of financial literacy on investment decision-making while investigating the moderating roles of herding behavior and loss aversion. The study is expected to contribute to the behavioral finance literature by providing empirical evidence on the interaction between financial knowledge and behavioral biases. The findings are also expected to support policymakers, educators, financial institutions, and investment platform

providers in developing financial education programs that strengthen both financial competence and emotional discipline, ultimately promoting more rational investment decisions in the digital era (Lusardi & Mitchell, 2023; OECD, 2023; Baker et al., 2023).

METHODS

This study used a quantitative approach with an associative approach and a cross-sectional survey design to examine the influence of financial literacy on investment decision-making, as well as the moderating role of herding behavior and loss aversion among Generation Z in Bengkulu. Data were collected through a Google Form-based questionnaire using a five-point Likert scale, then analyzed using simple linear regression and Moderated Regression Analysis (MRA) using SPSS version 27. The research variables consisted of financial literacy as the independent variable, investment decision-making as the dependent variable, and herding behavior and loss aversion as moderating variables, with all constructs measured using a reflective measurement model.

Financial literacy is defined as an individual's ability to understand and utilize financial information to make rational investment decisions. This variable is measured through five indicators: knowledge of investment instruments, ability to calculate risks and returns, understanding of financial products, ability to manage investment funds, and actively following financial information. Meanwhile, herding behavior is an individual's tendency to follow majority decisions or investment trends without independent analysis. This moderating variable is measured through six indicators: the tendency to follow other investors' decisions, imitate asset buying and selling behavior, consider majority decisions, react to market movements, follow the investment community's choices, and follow investment trends on social media. The higher the level of herding behavior, the greater the tendency to follow other investors, which is expected to weaken the influence of financial literacy on the quality of investment decision-making.

FINDINGS AND DISCUSSION

The Effect of Financial Literacy on Investment Decision-Making

The results of the first hypothesis test indicate that financial literacy has a positive and significant effect on investment decision-making, leading to the acceptance of Hypothesis 1

(H1). The regression analysis produced a coefficient (B) of 0.862, a t-statistic of 15.066, and a significance level of < 0.001 , while the overall model yielded an F-statistic of 226.996 ($p < 0.001$). These results demonstrate that higher financial literacy is associated with better investment decision quality among Generation Z investors in Bengkulu Province.

Higher financial literacy enables investors to understand fundamental financial concepts, including risk-return trade-offs, portfolio diversification, and the characteristics of various investment instruments. As a result, investors are more capable of evaluating financial information objectively and making rational investment decisions based on careful analysis rather than intuition or assumptions. This finding is consistent with Behavioral Finance Theory, which suggests that cognitive abilities, such as financial literacy, help investors process information effectively and reduce the influence of behavioral biases in decision-making (Barberis & Thaler, 2003).

The findings also support the perspective of Lusardi and Mitchell (2014), who argue that financial literacy involves not only financial knowledge but also the ability to apply that knowledge in practical financial decisions. The coefficient of determination (R^2) of 0.650 indicates that financial literacy explains 65.0% of the variation in investment decision-making, while the remaining 35.0% is influenced by other factors such as investment experience, risk tolerance, market conditions, and psychological characteristics that were not examined in this study.

These results are consistent with previous studies by Adil et al. (2021), Prasetyo (2023), Firmansyah (2023), Fatma Satyani (2024), Sconti et al. (2024), and Bustani (2024), all of which found that financial literacy positively and significantly influences investment decision-making. Overall, the findings reinforce Behavioral Finance Theory by confirming that stronger financial literacy enhances investors' ability to evaluate financial information, minimize cognitive biases, and make more rational and effective investment decisions.

Herding Behaviour as a Moderating Variable in the Relationship Between Financial Literacy and Investment Decision-Making

Based on the results of the Moderated Regression Analysis (MRA), the interaction variable between financial literacy and herding behaviour (Interaction_H2) produced a regression coefficient of -0.033 , a t-statistic of -3.588 , and a significance level of 0.001 . Since the significance value is substantially lower than the 0.05 threshold ($0.001 < 0.05$), the findings indicate that herding behaviour significantly moderates the relationship between financial literacy and investment decision-making. The negative interaction coefficient suggests that as the tendency toward herding behaviour increases, the positive effect of financial literacy on investment decision-making becomes weaker. Therefore, the second hypothesis (H2), which proposed that herding behaviour weakens the effect of financial literacy on investment decision-making, is supported.

From a theoretical perspective, financial literacy represents a cognitive capability that equips investors with rational analytical skills, including understanding investment risk, expected returns, and portfolio diversification (Lusardi & Mitchell, 2014). However, according

to Behavioral Finance Theory, investment decisions are not always entirely rational because they are also influenced by psychological factors and behavioral biases, one of which is herding behaviour. Behavioral Finance Theory explains that investment decisions result from the interaction between investors' cognitive abilities and their behavioral biases (Barberis & Thaler, 2003). Financial literacy reflects the cognitive dimension that enables investors to interpret and evaluate financial information rationally, whereas herding behaviour represents a behavioral bias that encourages individuals to imitate the actions of the majority without conducting independent analysis. When peers or social groups simultaneously engage in particular investment activities, strong psychological pressure arises to conform to group behavior. This social influence, often manifested through the phenomena of Fear of Missing Out (FOMO) and the You Only Live Once (YOLO) mindset, creates dominant behavioral biases that shape investment decisions (Ardelia et al., 2025; Gupta & Shrivastava, 2022).

Consequently, even when a Generation Z investor in Bengkulu possesses a high level of financial literacy, they may still disregard rational analysis, top-down or bottom-up investment evaluation, and risk management principles that they have learned. In Bengkulu, the influence of herding behaviour tends to be stronger due to several regional characteristics. As a non-metropolitan province, access to comprehensive financial information remains relatively limited compared to larger urban areas. As a result, Generation Z investors are more likely to rely on informal information sources, such as local investment communities, Telegram investment groups, and trends circulating on social media platforms. These findings are consistent with the study by Arriqoh and Zoraya (2024), conducted in Bengkulu, which demonstrated that herding behaviour mediates the relationship between financial literacy and investment decision-making among Generation Z investors.

The findings further reveal that although investors may possess adequate financial literacy, investment decisions are not determined solely by their cognitive ability to understand financial information. A strong tendency toward herding behaviour may lead investors to disregard their own analyses and financial knowledge, placing greater trust in the decisions and actions of other investors under the assumption that majority decisions are safer or more reliable than their personal evaluations.

These results are consistent with the findings of Adil et al. (2021), who reported that behavioral biases such as herding significantly influence investment decisions because investors tend to depend on external information and the decisions of other market participants rather than conducting independent analyses. Similar findings were reported by Ratnawati and Retno (2024), who concluded that herding behaviour weakens the influence of financial knowledge on investment decision-making. Likewise, Prasetyo (2023) found that herding behaviour reduces the effectiveness of financial literacy among young investors, reinforcing the argument that although financial literacy enhances analytical capability, herding bias remains dominant when investors face uncertainty and social pressure from their surrounding environment.

Overall, the findings of this study provide further support for Behavioral Finance Theory, which asserts that investment decisions are influenced not only by financial knowledge but also by investors' behavioral biases. Although financial literacy serves as a cognitive capability that promotes rational investment decision-making, the presence of herding behaviour encourages investors to prioritize information and actions originating from the group rather than relying on their own independent analyses. Consequently, the stronger the tendency toward herding behaviour, the weaker the positive influence of financial literacy on investment decision-making.

Based on the results of the Moderated Regression Analysis (MRA), the interaction variable between financial literacy and loss aversion (Interaction_H3) produced a regression coefficient of -0.023 , a t-statistic of -3.354 , and a significance level of 0.001 . Since the significance value is lower than the 0.05 threshold ($0.001 < 0.05$), the findings indicate that loss aversion significantly weakens the effect of financial literacy on investment decision-making. In other words, the higher the level of loss aversion, the weaker the positive influence of financial literacy on investment decision-making. Therefore, the third hypothesis (H3), which proposed that loss aversion weakens the effect of financial literacy on investment decision-making, is supported.

These findings confirm that among Generation Z investors in Bengkulu Province, loss aversion exerts a sufficiently strong influence to weaken investors' cognitive capabilities. The tendency toward loss aversion is particularly pronounced because many young investors have relatively limited investment experience and modest investment capital. The fear of suffering financial losses that could negatively affect their personal finances often leads them to become excessively cautious, hesitant, or even postpone investment decisions despite possessing adequate financial knowledge.

When investors experience a high degree of loss aversion, the emotional fear of potential financial losses may trigger a phenomenon known as analysis paralysis. From a cognitive perspective, these Generation Z investors may possess a high level of financial literacy, understand how to interpret financial statements, comprehend the risk-return trade-off, and recognize the importance of portfolio diversification. However, when it comes to executing actual investment decisions, the emotional bias associated with loss aversion tends to dominate their psychological responses, overriding the rational decision-making process.

The negative interaction coefficient further indicates that loss aversion functions as a weakening moderator, meaning that every increase in the level of loss aversion reduces the strength of the positive relationship between financial literacy and investment decision-making. In other words, loss aversion does not eliminate the benefits of financial literacy but diminishes its effectiveness in encouraging investors to make rational investment decisions. As the level of loss aversion increases, the positive contribution of financial literacy to investment decision quality becomes progressively weaker.

These findings suggest that even investors with high levels of financial literacy may experience reduced effectiveness of their financial knowledge when they exhibit strong loss aversion tendencies. Investors with higher levels of loss aversion tend to focus more on avoiding potential losses than on evaluating potential investment gains. As a result, they become excessively risk-averse, delay investment decisions, or select investment alternatives perceived as safer, even when such choices may not provide optimal investment returns. Consequently, the cognitive abilities that should facilitate rational investment decisions become less effective when influenced by emotional factors (Pompian, 2012).

The consistency of these findings is supported by numerous previous studies demonstrating that loss aversion negatively affects the quality of investment decision-making. Investors with high levels of loss aversion tend to retain losing assets for extended periods while selling profitable assets too quickly, thereby reducing overall portfolio performance. Studies by Firmansyah (2023) and Hussain et al. (2023) reported similar conclusions. Likewise, Adil et al. (2021) found that strong behavioral biases reduce the effectiveness of financial literacy in influencing investment decisions. Bassier et al. (2023) further argued that although financial literacy enables investors to understand investment risk and diversification, behavioral biases such as loss aversion continue to dominate the decision-making process, leading to analysis paralysis and delayed investment decisions. Similarly, Prasetyo (2023) concluded that emotional psychological factors weaken the influence of financial knowledge on the investment behavior of young investors in Indonesia. Collectively, these studies reinforce the empirical findings of the present research that loss aversion, as a powerful emotional bias, reduces the effectiveness of the cognitive dimension of financial literacy in producing rational investment decisions.

CONCLUSION

This study aimed to examine the effect of financial literacy on investment decision-making and to investigate the moderating roles of herding behaviour and loss aversion among Generation Z investors in Bengkulu Province. Based on the results of simple linear regression and Moderated Regression Analysis (MRA), the findings indicate that financial literacy has a positive and significant effect on investment decision-making, suggesting that higher levels of financial knowledge improve investors' ability to make rational and informed investment decisions. Furthermore, herding behaviour significantly moderates this relationship with a negative effect, indicating that a stronger tendency to follow the investment decisions of others weakens the positive influence of financial literacy on investment decision quality. Similarly, loss aversion also acts as a negative moderating variable, demonstrating that excessive fear of financial losses reduces the effectiveness of financial literacy in guiding rational investment decisions. Overall, the results highlight that while

financial literacy plays a crucial role in enhancing investment decision-making, its positive impact can be diminished by behavioral biases such as herding behaviour and loss aversion.

REFERENCES

- Adil, M., Singh, Y., & Ansari, M. S. (2021). How financial literacy moderate the association between behaviour biases and investment decision? <https://doi.org/10.1108/AJAR-09-2020-0086>
- Ardelia, S. S., Ketut, I. G., Ulupui, A., & Gurendrawati, E. (2025). The Role of Fear of Missing Out (FoMO) in Herding Behavior and Overconfidence on Generation Z's Investment Decisions. *International Journal of Current Economics & Business Ventures*, 5(1).
- Arriqoh, D., & Zoraya, I. (2024). The effect of financial literacy on Gen-Z crypto investment decision through herding behavior as mediator. *Manajemen dan Bisnis*, 23(1), 1. <https://doi.org/10.24123/mabis.v23i1.737>
- Barberis, N., & Thaler, R. (2003). A Survey of Behavioral Finance. NBER Working Paper Series.
- Bustani. (2024). Individual Investment: How Financial Literacy and Self-Monitoring Drive Investment Decisions. 7(126), 646–660.
- Fatma Satyani. (2024). The influence of financial literacy, herding and overconfidence on investment decision making among Indonesian Gen Z. *Finance & Accounting Research Journal*, 6(11), 2016–2027. <https://doi.org/10.51594/farj.v6i11.1686>
- Firmansyah, F. (2023). The Influence of Overconfidence Bias, Herding Effect, and Loss Aversion on Investment Decisions in the Capital Market with Financial Literacy as A Moderating Variable. *Journal of Business and Management Review*, 4(11), 871–897. <https://doi.org/10.47153/jbmr411.8252023>
- Gupta, S., & Shrivastava, M. (2022). Herding and loss aversion in stock markets: Mediating role of fear of missing out (FOMO) in retail investors. *International Journal of Emerging Markets*, 17(7), 1720–1737. <https://doi.org/10.1108/IJOEM-08-2020-0933>
- Hussain, M., Zulfiqar, B., Shafique, A., Malik, L., & Ashraf, P. (2023). The Impact of Herding, Loss Aversion, and Cognitive Dissonance on Individual Investor's Investment Decision Making: Moderating Role of Financial Literacy. *Jinnah Business Review*, 11(2), 1–19. <https://doi.org/10.53369/znll7178>
- Lusardi, A., & Mitchell, O. S. (2014). The economic importance of financial literacy: Theory and evidence. *Journal of Economic Literature*, 52(1), 5–44. <https://doi.org/10.1257/jel.52.1.5>

- Pompian. (2012). *Behavioral Finance and Wealth Management: How to Build Investment Strategies*. John Wiley & Sons.
- Prasetyo, P. (2023). The impact of disposition effect, herding and overconfidence on investment decision making moderated by financial literacy. *International Journal of Research in Business and Social Science*, 12(9), 241–251.
- Ratnawati, K., & Retno, W. C. (2024). The Herd Effect: How Financial Literacy Shapes Investment Decisions. *International Conference of Humanities and Social Science*, 4(1), 410–419.
- Sconti, A., Caserta, M., & Ferrante, L. (2024). Gen Z and financial education: Evidence from a randomized control trial in the South of Italy. *Journal of Behavioral and Experimental Economics*, 112, 102256. <https://doi.org/10.1016/j.socec.2024.102256>
- Adil, M., Singh, Y., & Ansari, M. S. (2021). How financial literacy moderate the association between behavioural biases and investment decision? *Asian Journal of Accounting Research*, 7(1), 17–30. <https://doi.org/10.1108/AJAR-09-2020-0086>
- Barberis, N., & Thaler, R. H. (2003). A survey of behavioral finance. In G. M. Constantinides, M. Harris, & R. M. Stulz (Eds.), *Handbook of the Economics of Finance* (Vol. 1, pp. 1053–1128). Elsevier.
- Kahneman, D., & Tversky, A. (1979). Prospect theory: An analysis of decision under risk. *Econometrica*, 47(2), 263–291. <https://doi.org/10.2307/1914185>
- Lusardi, A., & Mitchell, O. S. (2014). The economic importance of financial literacy: Theory and evidence. *Journal of Economic Literature*, 52(1), 5–44. <https://doi.org/10.1257/jel.52.1.5>