



The Influence of Financial Literacy and Investment Confidence on Investment Decisions through Risk Perception among Millennial Investors

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Abstract. This study examines the influence of Financial Literacy and Investment Confidence on Investment Decision through the mediating role of Risk Perception among millennial investors. The research employed a quantitative approach with an explanatory design. Data were collected using questionnaires from 150 millennial investors selected through purposive sampling based on investment experience, knowledge of investment instruments, and previous decision-making experience. The variables included Financial Literacy, Investment Confidence, Risk Perception, and Investment Decision, measured using a five-point Likert scale. Data analysis was performed using Structural Equation Modeling–Partial Least Squares (SEM-PLS), including validity, reliability, direct effect, and mediation testing. The results show that Financial Literacy and Investment Confidence have positive and significant effects on Risk Perception and Investment Decision. Risk Perception also significantly influences Investment Decision and partially mediates the relationship between Financial Literacy, Investment Confidence, and investment decisions. These findings indicate that millennial investment decisions are influenced not only by financial knowledge and confidence but also by investors' ability to perceive and evaluate risks. This study contributes to understanding the cognitive and psychological factors underlying investment behavior and provides implications for improving investment literacy and risk management capabilities.

Keywords: Financial Literacy; Investment Confidence; Investment Decision; Millennial Investors; Risk Perception.

1. INTRODUCTION

The development of capital markets in recent years has demonstrated a significant increase in individual investor participation, including among the millennial generation. This investment trend has been strengthened by digital technology advancement, which provides easier access to financial information, investment applications, and online trading services. These technological developments encourage younger generations to participate in investment activities as part of their long-term financial planning. However, the increasing number of investors has not always been accompanied by adequate knowledge and capability in making appropriate investment decisions. Putri et al. (2024) explained that financial literacy is an important factor influencing millennials' investment preferences because it determines individuals' ability to understand various investment instruments and associated risks.

Despite the increasing participation of millennial investors, this group still faces several challenges in the investment decision-making process. Limited financial literacy, insufficient investment experience, and inadequate understanding of risk may cause investors to make decisions based on subjective perceptions or herd behavior. Investors with low financial knowledge often experience difficulties in evaluating investment information and dealing with market uncertainty. Larson et al. (2016) demonstrated that financial knowledge is associated

with individuals' ability to understand investment risks and determine appropriate investment decisions. Furthermore, behavioral biases among investors may also influence the quality of investment decisions and lead to irrational choices (Agarwal et al., 2025).

Financial literacy and investment confidence are considered important factors in improving the quality of individual investment decisions. Financial literacy enables investors to understand investment concepts, evaluate available alternatives, and manage risks more effectively. Meanwhile, investment confidence reflects individuals' belief in their ability to analyze information and make independent investment choices. Subedi & Bhandari (2024) found that financial literacy contributes to better investment decisions by improving investors' understanding of psychological and financial factors. In addition, investment confidence supported by sufficient knowledge can help investors reduce uncertainty and enhance decision-making effectiveness (Auxilia et al., 2025).

In the context of investment decisions, risk perception represents a psychological mechanism that explains how investors evaluate uncertainty and potential losses before making investment choices. Risk perception is influenced not only by objective market conditions but also by financial literacy, investment experience, and individuals' confidence in their investment abilities. Previous studies indicate that risk perception plays an important role in shaping investment behavior and can act as a mediating variable between internal investor factors and investment decisions (Ahmed et al., 2022; Yanti & Endri, 2024). However, studies integrating financial literacy and investment confidence through the mediating role of risk perception, particularly among millennial investors, remain limited. Therefore, this study aims to examine the influence of financial literacy and investment confidence on investment decisions through risk perception as a mediating variable among millennial investors.

2. LITERATURE REVIEW

Millennial Investor Behavior

Millennial investor behavior demonstrates different characteristics compared with previous generations due to the influence of digital technology development, easier access to information, and changing patterns of financial decision-making. Millennials tend to utilize digital investment platforms to obtain investment information and conduct financial transactions; however, increased access does not always correspond with adequate analytical capabilities. Investment decisions among millennials are often influenced by a combination of rational and psychological factors, such as financial literacy, investment experience, risk

tolerance, and confidence in their ability to make investment decisions (Awais et al., 2016; Seraj et al., 2022).

From an investment behavior perspective, millennial investors do not always act based on rational assumptions because of information limitations, emotional factors, and cognitive biases. Psychological factors such as overconfidence, herding behavior, and the use of heuristic approaches can influence how investors evaluate investment opportunities and risks. Fachrudin et al. (2017) explained that heuristic behavior causes investors to use simplified decision-making approaches when dealing with complex market conditions, which may lead to less optimal investment decisions.

In addition to psychological factors, investors' ability to understand financial information is also an important factor in developing more effective investment behavior. Investors with better financial literacy tend to evaluate information more critically and reduce dependence on emotional decisions. Therefore, millennial investor behavior needs to be understood through an approach that integrates financial knowledge, psychological factors, and risk perception in investment activities (Li, 2020; Suresh, 2024).

Financial Literacy

Financial literacy refers to an individual's ability to understand financial concepts and utilize such knowledge to make appropriate financial decisions, including investment decisions. In the context of capital markets, financial literacy includes knowledge of investment instruments, the relationship between risk and return, portfolio diversification strategies, and the ability to evaluate financial information. A higher level of financial literacy enables investors to understand investment characteristics and select alternatives that are aligned with their financial objectives (Nalini et al., 2016; Kishan & Alfian, 2018).

Financial literacy plays an important role in improving investment decision quality because it helps investors reduce uncertainty and avoid decision-making errors. Investors with higher financial literacy are more likely to conduct objective analysis and become less influenced by behavioral biases such as herding and intuition-based decisions. Li (2020) explained that financial literacy is associated with individuals' ability to process financial information, while Agarwal et al. (2025) demonstrated that financial literacy can reduce the impact of behavioral biases on investment decisions.

However, low financial literacy remains a challenge in developing effective investment behavior. Limited understanding of investment risks, market mechanisms, and portfolio management strategies may lead investors to select inappropriate investment alternatives. Manoharan et al. (2024) emphasized that improving financial literacy requires continuous

educational approaches because individuals' financial capabilities are influenced by education, experience, and social environments.

Furthermore, previous studies indicate that financial literacy does not only directly influence investment decisions but also shapes investment intentions and individuals' readiness to face financial risks. Naqvi et al. (2025) found that financial literacy is associated with investment intention and investor decisions, while Murini et al. (2025) highlighted that financial literacy represents a strategic factor in supporting individuals' ability to make better investment decisions.

Investment Confidence

Investment confidence represents investors' level of belief in their ability to understand information, conduct analysis, and determine investment decisions. This concept is closely related to psychological aspects of investors, particularly the phenomenon of overconfidence bias, where individuals tend to overestimate their analytical and predictive abilities. High investment confidence may encourage investors to pursue investment opportunities; however, when it is not supported by sufficient knowledge, it may cause investors to underestimate actual investment risks (Seraj et al., 2022).

Conversely, investors with low confidence levels may experience difficulties in making investment decisions because they perceive themselves as incapable of evaluating information and dealing with market uncertainty. Therefore, investment confidence should be balanced with financial literacy to ensure that investors are able to make rational decisions. Suresh (2024) demonstrated that the relationship between financial literacy and behavioral biases influences how investors develop confidence and determine investment choices.

Furthermore, emotional aspects also contribute to the development of investor confidence. Investors with better emotional management abilities are more likely to handle market pressures and make more objective decisions. Chandu et al. (2023) found that emotional intelligence is associated with investor behavior in stock market activities because it influences individuals' ability to regulate psychological responses when facing changes in investment conditions.

Risk Perception

Risk perception refers to the psychological process through which investors evaluate uncertainty levels and potential losses associated with investment decisions. Risk perception is subjective because it is influenced by experience, knowledge, confidence level, and available information. Investors with high-risk perception tend to make more conservative decisions,

whereas investors with lower risk perception may be more willing to pursue investment opportunities with greater uncertainty (Wendy, 2024).

Within investment behavior, risk perception functions as an important mechanism that explains the relationship between psychological factors and investment decisions. Investors with higher financial literacy are generally able to evaluate risks more objectively because they possess better capabilities in interpreting investment information. Infant and Sundaram (2025) explained that risk perception acts as a mediating mechanism in explaining how individual factors influence investment decisions.

Moreover, risk perception is closely associated with behavioral biases such as overconfidence and herding behavior. Overconfident investors may underestimate investment risks, while investors influenced by social groups may make decisions without adequate analysis. Seraj et al. (2022) demonstrated that the relationship between confidence, financial literacy, and investment decisions is strongly influenced by how investors perceive investment risks.

Investment Decision

Investment decision refers to the process of selecting investment alternatives by considering expected returns, acceptable risks, and investors' financial objectives. Such decisions are influenced not only by economic factors but also by psychological factors, including experience, confidence, emotions, and risk perception. Therefore, investment decisions represent the interaction between individuals' cognitive capabilities and psychological conditions (Awais et al., 2016).

Previous studies indicate that financial literacy is one of the main factors influencing investment decisions because it helps investors understand investment characteristics and evaluate risks more effectively. Investors with higher financial literacy tend to have better capabilities in selecting investment alternatives that match their financial needs and objectives (Naqvi et al., 2025; Agarwal et al., 2025).

In addition to financial literacy, behavioral factors also contribute to investment decisions. Psychological biases such as heuristics, overconfidence, and social influence may cause investors to make decisions that deviate from rational principles. Fachrudin et al. (2017) & Suresh (2024) demonstrated that investment behavior is shaped by the interaction between financial knowledge and psychological factors.

Behavioral Finance Theory

Behavioral finance theory explains that financial decisions do not always follow the assumption of complete rationality proposed by traditional financial theories. This theory integrates psychological and financial perspectives to understand how emotions, perceptions, and cognitive biases influence investor behavior. The approach suggests that investors may make incorrect decisions due to information limitations and restricted cognitive processing abilities (Fachrudin et al., 2017).

In investment contexts, behavioral finance explains various phenomena such as overconfidence, heuristics, and herding behavior, which frequently occur in capital market activities. Investors with certain biases may make decisions based on personal perceptions rather than objective analysis. Kishan & Alfian (2018) emphasized that the ability to understand financial information is an important factor in reducing investment decision errors.

Theory of Planned Behavior

The Theory of Planned Behavior (TPB) explains that individual behavior is influenced by three main components: attitude toward behavior, subjective norms, and perceived behavioral control. In the investment context, this theory explains that investment decisions are influenced by individuals' beliefs regarding investment benefits, social influences, and perceptions of their ability to control investment activities (Naqvi et al., 2025).

Financial literacy can enhance perceived behavioral control by providing individuals with the ability to understand investment risks and benefits. Meanwhile, investment confidence can strengthen investors' beliefs that they are capable of conducting investment activities effectively. Therefore, TPB provides a relevant theoretical perspective for explaining the relationship between cognitive factors, psychological factors, and investment decisions (Nalini et al., 2016).

Previous Research and Research Gap

Previous studies consistently demonstrate that financial literacy, investment confidence, and risk perception contribute significantly to explaining investment decisions. Financial literacy has been proven to improve investors' ability to evaluate information and reduce the influence of behavioral biases, while psychological factors such as overconfidence may affect investors' risk-taking tendencies (Agarwal et al., 2025; Seraj et al., 2022).

Although investment decision research has developed significantly, many previous studies still focus on direct relationships between financial literacy, psychological factors, and investment decisions. Studies integrating financial literacy and investment confidence by

considering the mediating role of risk perception, particularly among millennial investors, remain relatively limited (Infant & Sundaram, 2025; Wendy, 2024).

Based on this research gap, this study develops a model explaining how financial literacy and investment confidence influence investment decisions through risk perception. This model is expected to contribute theoretically to understanding millennial investor behavior and provide practical implications for developing more effective investment education strategies (Murini et al., 2025; Manoharan et al., 2024).

3. RESEARCH METHODS

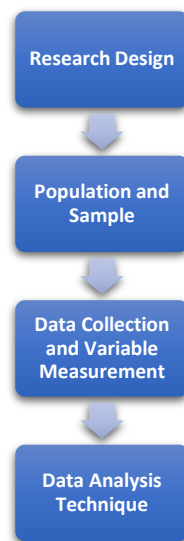


Figure 1. Research Methodology Framework.

Research Design

This study employed a quantitative approach with an explanatory research design to examine the relationships among Financial Literacy, Investment Confidence, Risk Perception, and Investment Decision among millennial investors. This approach was used to analyze the direct effects between variables and the mediating role of Risk Perception in explaining investment decision behavior.

Population and Sample

The population of this study consisted of millennial investors who have experience in investment activities. The sample was selected using purposive sampling based on specific criteria, including having investment experience, understanding investment instruments, and having made investment decisions independently. Based on these criteria, this study involved 150 millennial investors as respondents.

Data Collection and Variable Measurement

Data were collected using a structured questionnaire measured with a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The research variables consisted of Financial Literacy, Investment Confidence, Risk Perception, and Investment Decision. Each variable was measured using indicators related to financial knowledge, investment confidence, risk evaluation, and investment decision-making behavior.

Data Analysis Technique

The data were analyzed using Structural Equation Modeling with the Partial Least Squares approach (SEM-PLS). The analysis consisted of evaluating the measurement model (outer model) through validity and reliability testing, including convergent validity, discriminant validity, Cronbach's Alpha, and Composite Reliability. The structural model (inner model) was evaluated to examine the direct effects among constructs and the mediating effect of Risk Perception through bootstrapping analysis using path coefficients, t-statistics, and p-values.

4. RESULTS AND DISCUSSION

This study involved 150 millennial investors who met the research criteria, including having investment experience, understanding investment instruments, and having made investment decisions independently. The respondent characteristics were analyzed based on gender, age, investment experience, and preferred investment instruments. The results indicate that millennial investors involved in this study represent individuals who have actively participated in investment activities. The majority of respondents have investment experience of less than three years, indicating that many millennial investors are relatively new participants in financial markets. This condition highlights the importance of financial knowledge and psychological readiness in supporting effective investment decision-making.

Table 1. Respondent Characteristics.

Characteristics	Category	Frequency	Percentage
Gender	Male	82	54.7%
	Female	68	45.3%
Age	25–30 years	78	52.0%
	31–40 years	72	48.0%
Investment Experience	< 3 years	86	57.3%
	≥ 3 years	64	42.7%
Main Investment Instrument	Stocks	62	41.3%
	Mutual Funds	58	38.7%
	Other Instruments	30	20.0%

The respondent profile shows that the majority of millennial investors have experience in using investment products and understanding investment mechanisms. The dominance of younger investors with relatively limited experience indicates that investment decisions may be influenced by both knowledge-based considerations and individual psychological factors, particularly confidence and risk assessment.

Measurement Model Evaluation

The measurement model evaluation was conducted to examine the validity and reliability of the research constructs. The results show that all indicators have loading factor values above the recommended threshold, indicating that each indicator adequately represents its respective construct. The Average Variance Extracted (AVE) values for all variables are above 0.50, demonstrating adequate convergent validity. Furthermore, Cronbach's Alpha and Composite Reliability values exceed 0.70, confirming that all constructs have good internal consistency.

Table 2. Validity and Reliability Test Results.

Construct	Loading Factor	AVE	Cronbach's Alpha	Composite Reliability
Financial Literacy	0.721–0.864	0.612	0.842	0.887
Investment Confidence	0.735–0.879	0.641	0.861	0.899
Risk Perception	0.748–0.892	0.668	0.875	0.910
Investment Decision	0.756–0.901	0.689	0.883	0.917

The measurement model results indicate that all research variables meet the criteria for validity and reliability. Therefore, the constructs of Financial Literacy, Investment Confidence, Risk Perception, and Investment Decision are considered appropriate for further structural model analysis.

Structural Model Evaluation

The structural model evaluation was conducted to analyze the relationships among the research variables. The results of the analysis indicate that the research model has good explanatory capability. The coefficient of determination (R^2) shows that Financial Literacy and Investment Confidence explain 52.4% of the variance in Risk Perception. Meanwhile, the combination of Financial Literacy, Investment Confidence, and Risk Perception explains 61.7% of the variance in Investment Decision.

Table 3. Direct Effect Testing Results.

Relationship	β	t-statistics	p-values	Result
Financial Literacy → Risk Perception	0.324	4.218	<0.001	Supported
Investment Confidence → Risk Perception	0.386	5.047	<0.001	Supported
Financial Literacy → Investment Decision	0.291	3.672	<0.001	Supported
Investment Confidence → Investment Decision	0.338	4.526	<0.001	Supported

Relationship	β	t-statistics	p-values	Result
Risk Perception → Investment Decision	0.267	3.214	0.001	Supported

The results demonstrate that financial literacy has a positive and significant effect on risk perception. This indicates that investors with better financial knowledge are more capable of understanding investment uncertainty and evaluating potential risks before making decisions. Financial knowledge enables investors to interpret investment information more effectively and develop more realistic perceptions regarding possible outcomes.

Investment confidence also shows a positive and significant influence on risk perception. This finding indicates that investors who have stronger confidence in their investment capabilities tend to have better awareness when evaluating risks. However, confidence needs to be balanced with appropriate knowledge because excessive confidence may lead investors to underestimate potential risks.

Furthermore, financial literacy and investment confidence have a positive and significant effect on investment decisions. Investors who understand financial concepts and have confidence in their analytical abilities tend to make investment decisions more systematically. This finding indicates that investment decisions are influenced by both cognitive factors, represented by financial knowledge, and psychological factors, represented by investor confidence.

Risk perception also has a significant influence on investment decisions. This result shows that investors consider uncertainty and potential losses when selecting investment alternatives. The ability to evaluate risk appropriately helps investors determine investment choices that are aligned with their financial objectives and risk tolerance.

Mediation Analysis

The mediation analysis was conducted to examine the role of Risk Perception as an intervening variable between Financial Literacy, Investment Confidence, and Investment Decision. The results indicate that Risk Perception partially mediates the relationship between both independent variables and investment decisions.

Table 4. Mediation Testing Results.

Indirect Relationship	β	t-statistics	p-values	Mediation Type
Financial Literacy → Risk Perception → Investment Decision	0.087	2.764	0.006	Partial Mediation
Investment Confidence → Risk Perception → Investment Decision	0.103	3.118	0.002	Partial Mediation

The mediation results indicate that financial literacy influences investment decisions both directly and indirectly through risk perception. Investors with higher financial literacy are better able to evaluate risks, which subsequently influences their investment choices. This

finding suggests that knowledge alone is not sufficient; the ability to interpret and manage perceived risks is also an important component in investment decision-making.

Similarly, risk perception mediates the relationship between investment confidence and investment decisions. Investors with higher confidence levels tend to evaluate investment risks differently, which influences their final decisions. This finding indicates that psychological factors and risk evaluation processes work together in shaping investment behavior.

Overall, the results demonstrate that millennial investment decisions are influenced by a combination of financial knowledge, confidence, and risk evaluation. Financial literacy provides the foundation for understanding investment alternatives, investment confidence strengthens decision-making ability, while risk perception determines how investors respond to uncertainty.

5. CONCLUSION AND SUGGESTIONS

Based on the research findings, it can be concluded that Financial Literacy and Investment Confidence play important roles in shaping investment decisions among millennial investors. The results indicate that financial literacy and investment confidence have positive effects on Risk Perception, which subsequently influences Investment Decision. Furthermore, Financial Literacy and Investment Confidence also have direct effects on investment decisions. The mediating role of Risk Perception demonstrates that investors' ability to understand and evaluate risks serves as an important mechanism connecting financial knowledge and self-confidence with investment decision-making behavior. These findings indicate that millennial investment decisions are not only influenced by the ability to understand financial information but also by psychological aspects in assessing uncertainty and investment risks.

Based on the research findings, millennial investors are encouraged to improve their financial literacy and risk evaluation capabilities before making investment decisions to ensure that selected investment instruments align with their financial objectives and risk tolerance. In addition, investment confidence should be balanced with adequate financial knowledge to prevent excessive risk-taking and speculative decisions. For financial education institutions and investment service providers, this study provides insights for developing investment literacy programs that focus not only on product knowledge but also on strengthening risk management skills and investors' psychological readiness. Future research is recommended to consider additional variables such as investment experience, herding behavior, risk tolerance, and social factors that may further explain investment decision-making behavior among millennial investors.

REFERENCES

- Abbas Naqvi, N., Siddiqui, D. A., & Mir, M. M. (2025). Financial literacy and investment decisions of investors of Islamic banks in Pakistan: The role of intention to invest and religiosity. *Interdisciplinary Journal of Management Studies*, 18(2), 225–239. <https://doi.org/10.22059/IJMS.2025.366223.676233>
- Agarwal, A., Rao, N. V. M., & Nogueira, M. C. (2025). Financially savvy or swayed by biases? The impact of financial literacy on investment decisions: A study on Indian retail investors. *Journal of Risk and Financial Management*, 18(6), Article 322. <https://doi.org/10.3390/jrfm18060322>
- Ahmed, Z., Rasool, S., Saleem, Q., Khan, M. A., & Kanwal, S. (2022). Mediating role of risk perception between behavioral biases and investor's investment decisions. *SAGE Open*, 12(2), 1–14. <https://doi.org/10.1177/21582440221097394>
- Auxilia, P. A. M., Subramanian, K. P., Prabadevi, M. N., & Rengarajan, V. (2025). Financial literacy and wellness in South India: The mediating role of self-efficacy. *Finance India*, 39(1), 205–220.
- Awais, M., Fahad Laber, M., Rasheed, N., & Khursheed, A. (2016). Impact of financial literacy and investment experience on risk tolerance and investment decisions: Empirical evidence from Pakistan. *International Journal of Economics and Financial Issues*, 6(1), 73–79.
- Bhattacharya, G. D., & Sarkar, A. (2023). Perceptions of financial literacy among students in higher education. In *Perspectives in sustainable management practices* (pp. 120–128). Routledge. <https://doi.org/10.4324/9781032640488-16>
- Chandu, V., Maddala, S., Sai, K. G. D., Teja, G. C., Prakash, B. J., Rao, B. N., & Osei, B. (2023). Research on retail buyers' emotional quotient with focus on transactions on the National Stock Exchange. *International Journal of Engineering Business Management*, 15, 1–12. <https://doi.org/10.1177/18479790231180770>
- Chardon, T., Freudenberg, B., & Brimble, M. (2016). Are Australians under or over confident when it comes to tax literacy, and why does it matter? *eJournal of Tax Research*, 14(3), 650–682.
- Fachrudin, K. R., Lumbanraja, P., Sadalia, I., & Lubis, A. N. (2017). Analysis of heuristic behavior on investment decision. *International Journal of Economic Research*, 14(20), 297–309.
- Infant, S. P. H., & Sundaram, N. (2025). Decoding individual investors' behavior: Unveiling risk perception as a mediator in the Indian stock market. *International Research Journal of Multidisciplinary Scope*, 6(2), 1079–1090. <https://doi.org/10.47857/irjms.2025.v06i02.03194>
- Kishan, K., & Alfian, E. (2018). Financial statement literacy of individual investors in China. *International Journal of China Studies*, 9(1), 3–28.
- Larson, L. R. L., Eastman, J. K., & Bock, D. E. (2016). A multi-method exploration of the relationship between knowledge and risk: The impact on millennials retirement investment decisions. *Journal of Marketing Theory and Practice*, 24(1), 72–90. <https://doi.org/10.1080/10696679.2016.1089765>

- Li, X. (2020). When financial literacy meets textual analysis: A conceptual review. *Journal of Behavioral and Experimental Finance*, 28, Article 100402. <https://doi.org/10.1016/j.jbef.2020.100402>
- Manoharan, G., Nithya, G., Razak, A., Durai, S., Sharma, S., & Ashtikar, S. P. (2024). Enhancing financial literacy: Strategies, challenges, and global initiatives. In *Emerging perspectives on financial well-being* (pp. 111–128). IGI Global. <https://doi.org/10.4018/979-8-3693-1750-1.ch006>
- Murini, Mas'ud, A., Sujono, & Sukotjo, E. (2025). The role of financial literacy on investment decisions in supporting agricultural development: What is the future agenda? *Journal of Global Innovations in Agricultural Sciences*, 13(1), 309–318. <https://doi.org/10.22194/JGIAS/25.1537>
- Nalini, R., Alamelu, R., Amudha, R., & Cresenta Shakila Motha, L. (2016). Financial literacy and its contributing factors in investment decisions among urban populace. *Indian Journal of Science and Technology*, 9(27), Article 97616. <https://doi.org/10.17485/ijst/2016/v9i27/97616>
- Putri, A. I., Dalimunthe, Z., Triono,