The Influence of Overconfidence, Considering the Past, and Social Interaction on Investment Decisions

Rury Novita Sibulo[1], Darwis Said[2] *a*nd Muhammad Irdam Ferdiansah[3]

University Hasanuddin, Makassar, Indonesia
sibulorn22a@student.unhas.ac.id

Abstract. This study investigates the influence of overconfidence, considering the past, and social interaction on investment decisions among investors in Makassar. Using a triangulation strategy, data was obtained through questionnaires filled out by investors and detailed interviews to reinforce the analytical outcomes. Findings indicate that overconfidence significantly impacts investment decisions; investors exhibiting higher levels of confidence tend to make more substantial and riskier investments, aligning with previous research suggesting that overconfident investors believe they possess superior information. Additionally, consideration of past experiences proved to be an important factor in decision-making, as investors use their prior investment outcomes as references to assess current risks and opportunities. Social interaction was also found to have a positive effect, where investors engaged in social networks are more likely to make informed decisions. The triangulation approach employed in this study provides consistent evidence between quantitative data from questionnaires and qualitative insights from interviews, enhancing the understanding of investment decision-making dynamics in Makassar. This study provides a deeper understanding of the dynamics of investment decision-making and emphasizes the importance of a comprehensive approach in analyzing investor behavior.

Keywords: Overconfidence, Considering The Past, Social Interaction, Investment Decisions, Triangulation

1 Introduction

1.1 Research Background

The Covid-19 pandemic, which started in early 2020, has significantly affected many areas of life, especially in the economy and business sectors. The uncertainty caused by the pandemic has led to a significant decline in the Jakarta Composite Index (IHSG), reflecting drastic changes in the dynamics of the business world. Data indicates a sharp drop in both IHSG and average stock trading during 2020, coinciding with the pandemic's arrival in Indonesia.

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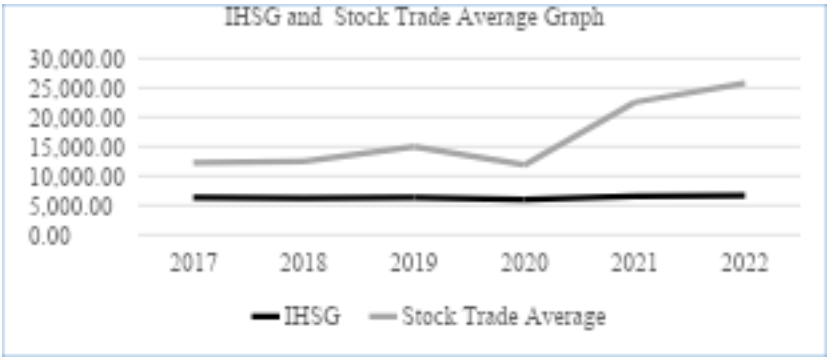


Fig. 1. IHSG and Stock Trade Average Graph

Source: *Otoritas Jasa Keuangan, 2024*

The available data shows that the onset of Covid-19 in Indonesia has become a negative sentiment continuously pressuring global market performance. This situation has prompted consumers to be more cautious in their spending, resulting in decreased demand for consumer goods. Furthermore, disruptions in global supply chains due to travel restrictions and factory closures in various countries have led to production delays and increased costs.

Fig. 2. Investor Growth

Source: *KSEI, 2024*

Amid these challenges, an interesting phenomenon has emerged: a notable rise in the number of investors in the Indonesian capital market. According to data from KSEI, the number of registered investors reached over 10 million by 2022, a substantial increase compared to previous years. This trend reflects a change in societal behavior towards investing, particularly among younger generations, with investors under the age of 30 comprising a substantial portion.

This phenomenon is important as it creates new dynamics in investment decision-making. Various psychological and social factors play significant roles in this process. Previous research indicates that overconfidence can lead investors to underestimate risks, as highlighted by [9]. Additionally, past experiences can influence investment decisions; [13] noted that consideration of previous experiences can enhance

predictive strength regarding investments. Social interaction also affects investment decisions, where insights from brokers or peers can influence investor behavior, as shown in studies [5].

Cognitive theory is applicable here, highlighting the challenges individuals encounter when processing information. Investors frequently use heuristics or simple rules to make decisions, which may lead to biases in evaluating risk and making choices. The constraints in processing pertinent information force investors to rely on readily available experiences and data, which can impact their investment decisions.

This study intends to explore how overconfidence, previous experiences, and social interactions affect investment decisions, particularly among investors in Makassar. The research aims to offer a more profound understanding of the factors that shape investment behavior in times of economic uncertainty.

2 Theoretical Review

2.1 Cognitive Theory

The term "cognitive" originates from the Greek word "gnosco," meaning "to know," and the Latin "cogito," meaning "I think." Cognitive psychology studies how we perceive, learn, remember, and process information. Research on decision-making heuristics began in the late 1960s and early 1970s, notably by [18]. In cognitive psychology, judgment evaluates options, while decision-making involves selecting from these alternatives [19]. Discovered that people often rely on heuristics—mental shortcuts that simplify complex decisions, though these may lead to suboptimal outcomes. Thus, cognitive theory explains how individuals perceive and process information, highlighting the influence of cognitive biases on decision-making.

In investment contexts, cognitive theory clarifies how factors like overconfidence, consideration of past experiences, and social interactions affect decision-making processes. Overconfidence can disrupt rational information evaluation, leading investors to ignore contrary evidence and misjudge risks. Similarly, past experiences influence current choices, often skewing risk perceptions based on prior successes or failures. Furthermore, social interactions can shape cognitive processes, causing individuals to conform to the opinions of others, potentially resulting in less rational investment decisions.

2.2 Decision-Making

Decision-making can be defined in multiple ways. According to [17], it is the act of choosing a course of action from several options. S.P. Siagian emphasizes that it entails a structured method for assessing different choices. In essence, decision-making is a systematic process aimed at identifying the optimal solution among the available alternatives.

In the context of investments, choices are shaped by anticipated returns, levels of risk, and the interplay between risk and returns. Investors fall into three categories: risk-seekers, risk-indifferent, and risk-averse [21]. Each type navigates risk differently, affecting their investment strategies.

2.3 Overconfidence

Overconfidence refers to an imbalance in self-assurance, where individuals overestimate their predictive abilities [11]. This can lead to behaviors like excessive trading, neglecting downside risks, and insufficient diversification. Investors may ignore potential losses and retain poorly diversified portfolios due to inflated confidence in their choices.

2.4 Considering the Past

Investors often evaluate past experiences to inform future decisions [10]. Successes may encourage risk-taking, while losses can lead to risk aversion, demonstrating how prior outcomes shape risk tolerance.

2.5 Social Interaction

Social interactions influence investment decisions, as individuals often rely on the opinions of others [12]. Recommendations from brokers and peers can significantly impact investment choices.

3 Hyphothesis

3.1 The Influence of Overconfidence on Investment Decisions

Cognitive Theory recognizes that investors do not always act rationally and that their decisions are frequently swayed by psychological elements. Overconfidence is one of the cognitive biases frequently observed in investor behavior. Defined as an excessive belief in one's abilities or knowledge regarding investment decisions [11], overconfidence can significantly impact how investors assess risk. Those exhibiting overconfidence tend to underestimate or disregard the risks associated with an investment. This can lead to risk-taking behavior that exceeds what is warranted, as they believe they can manage risks more effectively or possess superior knowledge than they actually do.

Earlier research has investigated how overconfidence affects investment choices. Studies by [22] and [7] identified a notable effect of overconfidence on these decisions, indicating a positive correlation between the two [1]. However, this conclusion is challenged by [8], which suggests that overconfidence does not influence investment decision-making. Given these insights, the following hypothesis is suggested:

H1: Overconfidence positively influences investment decisions.

3.2 The Influence of Considering the Past on Investment Decisions

Cognitive Theory suggests that considering the past can influence investment decisions by leading investors to overly focus on past experiences and historical outcomes, often neglecting current information and context. This bias can result in

irrational and suboptimal decisions. Positive past experiences in certain investments may cause investors to become overconfident and repeat the same strategies, even when market conditions change. Conversely, negative experiences can make investors overly cautious or lead them to avoid similar types of investments in the future.

Based on the findings presented in [3], people often draw on their previous experiences when making decisions, particularly in investment contexts, where future choices are shaped by earlier behaviors in the market. Various studies have investigated how the consideration of past experiences impacts investment decisions. For instance, [13] demonstrated that past behavioral biases significantly influence investment decisions and improve the ability to predict future investment outcomes. Conversely, [14] determined that past considerations do not affect investment decisions. Hence, from this discussion, the following hypothesis is put forward:

H2: Considering the past positively influences investment decisions.

3.3 The Influence of Social Interaction on Investment Decisions

Social interaction represents the ways in which individuals communicate and share information regarding investments. Opinions and interactions with others can significantly influence one's investment decisions [10]. Investors affected by social interaction often choose or modify their investment decisions based on discussions or advice received from fellow investors or other market participants.

In the context of cognitive theory, decision-making is heavily influenced by behavioral patterns. Investors often engage in social interactions, leading them to follow or mimic the actions of their peers. When a group of investors chooses to invest in a specific asset, others might feel an inclination to follow suit, even if they have not conducted their own fundamental analysis.

Numerous studies have explored the effect of social interaction on investment decisions. Research by [6] indicates that social interaction has a positive impact on these decisions. Likewise, a study conducted by [5] in Nepal also reported a beneficial effect of social interaction on investment choices. In contrast, [20] found no significant relationship between social interaction and investment decisions. Given these findings, the following hypothesis is proposed:

H3: Social interaction positively influences investment decisions.

4 Research Methods

This research employs a quantitative approach aimed at testing theories and establishing correlations between various variables, alongside summarizing data statistically and making predictions about outcomes, as outlined by [15]. This structured and formal method requires careful preparation before implementation. The study is conducted in Makassar, utilizing data from the official websites of the Central Securities Depository (KSEI) and the Central Bureau of Statistics (BPS) to gather information on investors and demographic statistics. The research is scheduled to take place from June 2024 until its completion.

The target population for this study includes residents of Makassar, specifically those aged over 15, totaling 1,103,957 individuals according to the BPS (2024). The

sampling process involves purposive sampling, where participants must meet specific criteria: they must reside in Makassar, be over 17 years old, and have experience with investments in the capital market. The sample size is determined to be 65 respondents based on guidelines from [4], which recommend a ratio of 5 to 10 respondents per indicator in Structural Equation Modeling (SEM).

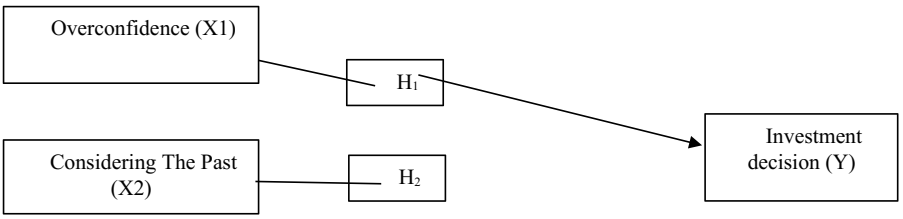
Data collection utilizes triangulation methods to ensure validity and reliability. This involves sourcing data from various methods, including questionnaires and interviews. The structured questionnaire assesses factors such as overconfidence, the consideration of past experiences, and social interaction, all of which influence investment decisions. Interviews are conducted to verify and deepen the understanding of the data collected through the questionnaires.

The research focuses on several key variables: the dependent variable is investment decisions, while the independent variables include overconfidence, considering past experiences, and social interaction. Each variable is operationally defined to clarify its role in the study, ensuring that the constructs are well-understood and measurable.

Data validity is tested through triangulation, which checks for consistency across different sources. The analysis utilizes SmartPLS 4.0 for structural equation modeling, assessing both the outer and inner models to evaluate the relationships between variables. Hypothesis testing is conducted using bootstrapping techniques, allowing for a thorough examination of the proposed relationships in the model. Overall, this research aims to contribute to understanding how psychological and social factors influence investment decisions among residents of Makassar.

5 Result

The proposed hypothesis posits a positive impact of overconfidence on investment decisions, alongside the effects of considering the past and social interaction. To examine these hypotheses, the study utilizes Structural Equation Modeling (SEM) with a Partial Least Squares (PLS) approach, specifically incorporating Moderated Regression Analysis (MRA). Within the SEM framework, two models are developed: the measurement model (outer model) and the structural model (inner model). This research encompasses 10 indicators spanning 5 variables: overconfidence (X1) with 4 indicators, considering the past (X2) with 2 indicators, social interaction (X3) with 2 indicators, and investment decisions (Y) with 2 indicators. This section will present the results of the verification analysis regarding the influence of each variable, performed using SmartPLS 4.0 software.



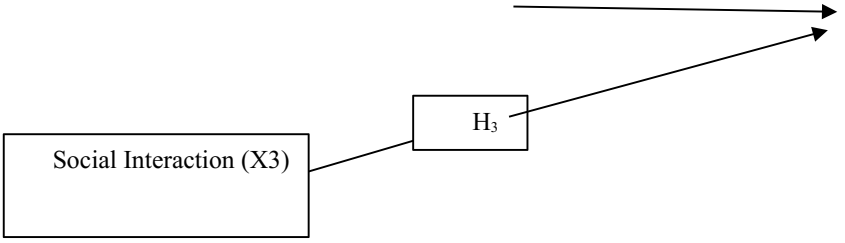


Fig. 3. Research Model

5.1 **Outer Model**

The evaluation of the outer model focuses on assessing the effectiveness of the instruments used to measure the study's variables. Validity testing is essential to confirm that these instruments accurately reflect the intended constructs. Through validity tests, we can determine the legitimacy of the instruments. The validity of the questionnaire is based on its capacity to produce relevant and meaningful information from the statements provided.

Validity test

Convergent validity

Convergent validity is assessed through outer loading values, where an indicator is considered valid if its value exceeds 0.70. Conversely, indicators with values below 0.70 are deemed invalid. Based on the testing results using SmartPLS 4.0, the findings are as follows:

Table 1. Outer Loadings

Variable	X1.	X2.	X3.	Y.
X1.1	0.890			
X1.2	0.898			
X1.3	0.941			
X1.4	0.877			
X2.1		0.907		
X2.2		0.911		
X3.1			0.960	
X3.2			0.966	
Y.1				0.891
Y.2				0.920

Discriminant Validity

Table 2. Fornell-Lacker Criterion

Variable	X1.	X2.	X3.	Y.
X1.	**0.902**			
X2.	0.251	**0.909**		
X3.	0.277	0.075	**0.963**	
Y.	0.393	0.455	0.578	**0.906**

Based on Table 2, the square root of the Average Variance Extracted (AVE) for each variable is greater than the correlations among the constructs. This indicates that all variables exhibit discriminant validity.

Realibility testing

Table 3. Construct realibilty and validity

Variable	Cronbach's alpha	Composite reliability (rho_c)
X1.	0.923	0.946
X2.	0.791	0.905
X3.	0.922	0.963
Y.	0.782	0.901

The Cronbach's alpha and composite reliability values for all variables exceed 0.70, demonstrating that all variables are reliable.

Collinearity

Table 4. Collinearity Statistic

Variabel	VIF
X1.1	3.141
X1.2	2.934
X1.3	4.335
X1.4	2.790
X2.1	1.747
X2.2	1.747
X3.1	3.741
X3.2	3.741
Y.1	1.702
Y.2	1.702

From the VIF values presented in the table, it can be seen that all VIF values are less than 5.0, which suggests that the data do not exhibit high collinearity. This indicates that the variables used will not lead to errors in significance assessment and weight estimation.

5.2 Inner Model

The outer model illustrates how indicators measure latent variables, demonstrating the connection between measurable variables and constructs that are not directly quantifiable.

Coefficient of Determination (R^2).

Table 5. R-Square

Variabel	R-square	R-square adjusted	Interpretasi
Y. Keputusan Investasi	0.704	0.674	Medium

The R-Square value for the Investment Decision variable is 0.704, indicating that the variables Overconfidence, Considering the Past, and Social Interaction can explain the Investment Decision variable by 70.4%. This suggests that the model is considered moderate.

Effect Size (F-Square)

Effect size, represented by f-square, is utilized to evaluate the significance of the relationship between variables. An f-square of 0.02 indicates a weak effect, 0.15 signifies a medium effect, and 0.35 indicates a strong effect. Values lower than 0.02 may be deemed inconsequential or negligible. The calculations for f-square are presented below:

Table 6. F-Square

Variabel	Y.	Interpretation
X1.	0.158	Medium
X2.	0.131	Weak
X3.	0.077	Weak

Based on the above table, the effect of Overconfidence on Investment Decisions is 0.158, considered medium. The effect of Considering the Past on Investment Decisions is 0.131, regarded as weak. The effect of Social Interaction on Investment Decisions is 0.077, also considered weak.

5.3 Hyphothesis testing

The decision to accept the hypothesis is based on the t-statistic value exceeding 1.64, as this study employs a one-tailed hypothesis, with a p-value less than 0.05, taking into account the path coefficients. Conversely, if the t-statistic is less than 1.64 and the p-value is less than 0.05, the hypothesis is rejected. The results from the path coefficients are as follows:

Table 7. Path Coefficients

Variabel	Original sample (O)	T statistics	P values	Interpretation
X1. -> Y.	0.270	2.193	0.014	Positive Influence
X2. -> Y.	0.223	2.599	0.005	Positive Influence
X3. -> Y.	0.197	2.063	0.020	Positive Influence

The explanations are as follows:

- For the Overconfidence variable, the P-Value is 0.014 < 0.05, and the t-statistic is 2.193 > 1.64 with a positive coefficient of 0.270, leading to the acceptance of H1, indicating that Overconfidence positively influences Investment Decisions.
- For the Considering the Past variable, the P-Value is 0.005 < 0.05, and the t-statistic is 2.599 > 1.64 with a positive coefficient of 0.223, resulting in the acceptance of H2, indicating that Considering the Past positively influences Investment Decisions.
- For the Social Interaction variable, the P-Value is 0.020 < 0.05, and the t-statistic is 2.193 > 1.64 with a positive coefficient of 0.197, leading to the acceptance of H3, indicating that Social Interaction positively influences Investment Decisions.

6 Conclusion

6.1 Conclusion

The findings from the statistical analysis and interviews in this study indicate that three key factors overconfidence, the consideration of past experiences, and social interaction have a positive and significant impact on investment decisions.

Overconfidence: The findings indicate that higher levels of confidence in investors lead them to make larger and riskier investment decisions. This is consistent with previous research showing that overconfident investors tend to engage in more transactions, believing they possess superior information. Considering the Past: Past experiences serve as a crucial reference for investors in their decision-making

process. Informants acknowledged that their previous investment experiences significantly impact their current choices. This highlights the importance of a sound cognitive understanding in navigating future decisions. Social Interaction: A higher level of social interaction contributes to better investment decisions. The study confirms that communication and information exchange among investors can enhance understanding and accuracy in investment decision-making.

Overall, this research demonstrates that overconfidence, considering the past, and social interaction significantly influence investment decisions. The triangulation approach, combining data from questionnaires and interviews, proved effective in providing deeper insights into the dynamics of decision-making among investors.

6.2 Implications

For Investors: The results of this study suggest that understanding the influence of overconfidence, considering the past, and social interaction on investment decisions can help investors make more informed choices. Investors in Makassar are encouraged to be more aware of potential cognitive biases, such as overconfidence, considering the past, and the social interactions they engage in.

For Financial Practitioners: Financial advisors and investment planners can utilize these findings to educate clients about the importance of managing overconfidence and reflecting on their past experiences. Training sessions and seminars on rational investment decision-making could be conducted to help investors develop better decision-making skills.

For Researchers and Academics: This research can serve as a foundation for further studies on the influence of cognitive and social factors in investment decision-making, particularly in local contexts such as Makassar. Future researchers are encouraged to explore differences in investment behavior based on demographic, cultural, and economic factors.

6.3 Limitations and Recommendations

Limited Sampling: This study was conducted in Makassar, which may not represent the entire population of investors in Indonesia. Thus, caution should be exercised when generalizing the findings.

Data Collection Methods: This research employed questionnaires and interviews, relying on the subjectivity of respondents. There may be biases in the provided answers, and respondents might not fully disclose or accurately report their investment behaviors.

Uncovered Variables: This research focused solely on three independent variables: overconfidence, the consideration of past experiences, and social interaction. Numerous other factors that might affect investment decisions, including economic conditions, market knowledge, and individual motivations, were not explored in this study.

Sample Expansion: It is suggested that future studies include a broader and more varied sample from different areas of Indonesia to obtain results that are more representative and generalizable.

Exploration of Other Variables: Upcoming studies should explore additional variables that may influence investment decisions, such as macroeconomic conditions, individual risk profiles, or levels of financial education.

References

1. Ahmed, R., Riaz, S. A. M. I. N. A., AQDAS, R., & Hassan, S. I. U. 2021. The relationship among overconfidence, economic expectation, social factors and investment decision making behavior with the mediating and moderating effects. Journal of Contemporary Issues in Business and Government, 27(2), 1076.
2. Barber, B. M., & Odean, T. 2001. Boys will be boys: Gender, overconfidence, and common stock investment. The quarterly journal of economics, 116(1), 261-292.
3. Chenari, H. A. & Haroonkolaee, K.2024. Investigating the moderating role of past behavior in the relationship between risk aversion and investment choice in the Tehran stock market. Journal of Accounting and Investment, 25(1), 348-368.
4. Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2021). A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM). Los Angeles: SAGE Publications.
5. Hamal, S., Pradhan, S., & Rawal, M. 2022. Impact of Social Factors on Individual Investor Decision Making in Nepal. Unlocking the Potential of Post Covid Transformations in Commerce & Management for Economic Development and Sustainability, 25.
6. Hervé, F., Manthé, E., Sannajust, A., & Schwienbacher, A. 2019. Determinants of individual investment decisions in investment-based crowdfunding. Journal of Business Finance & Accounting, 46(5-6), 762-783.
7. Kartini, K., & Nahda, K. 2021. Behavioral biases on investment decision: A case study in Indonesia. The Journal of Asian Finance, Economics and Business, 8(3), 1231-1240.
8. Mahardhika, M. D., & Asandimitra, N. 2023. Pengaruh overconfidence, risk tolerance, return, financial literacy, financial technology terhadap keputusan investasi yang dilakukan mahasiswa Surabaya. Jurnal Ilmu Manajemen, 602-613.
9. Mahmood, F., Arshad, R., Khan, S., Afzal, A., & Bashir, M. 2024. Impact of behavioral biases on investment decisions and the moderation effect of financial literacy; an evidence of Pakistan. Acta Psychologica, 247, 104303.
10. Nofsinger, J. R. 2010. The psychology of investing. (Fourth Edition). Boston: Prentice Hall.
11. Pompian, Michael M. 2012. Behavioral finance and wealth management. Canda: John Wiley & Sons.
12. Preda, A., & Muradoglu, G. 2019. Groups, social processes and decision making in finance. Qualitative Research in Financial Markets, 11(4), 429-455.
13. Raut, R. K., Das, N., & Kumar, R. 2018. Extending the theory of planned behaviour: Impact of past behavioural biases on the investment decision of Indian investors. Asian Journal of Business and Accounting, 11(1), 265-291.
14. Rijanto, B. P., & Utami, N. 2024. Financial technology, social media influencers, and experience of cryptocurrency investment decisions: Financial literacy's role. Jurnal Manajemen Maranatha, 23(2), 201-216.
15. Sekaran, Uma dan Roger Bougie. 2017. Research Methods for Business A skill – Building Approach. Seventh Edition. Wiley
16. Shiller, R. J. 2000. Measuring bubble expectations and investor confidence. The Journal of Psychology and Financial Markets, 1(1), 49-60.
17. Terry, George R. 2004. Prinsip-prinsip manajemen. Terjemahan J. Smith D. F. M. Jakarta: Bumi Aksara.

18. Tversky, A., & Kahneman, D. 1974. Judgment under Uncertainty: Heuristics and Biases: Biases in judgments reveal some heuristics of thinking under uncertainty. science, 185(4157), 1124-1131.
19. Tversky, A., & Kahneman, D. 1981. The framing of decisions and the psychology of choice. science, 211(4481), 453-458.
20. Wahyuni, A. N., & Kristanto, R. S. 2022. Pendekatan psikologi untuk keputusan investasi di masa pandemi covid-19. Econbank: Journal of Economics and Banking, 4(2), 166-180.
21. Weston, J Fred & E. Copeland. 1999. Manajemen keuangan, Jilid ke-1, Edisi ke-8, Airlangga.
22. Yulianis, N., & Sulistyowati, E. 2021. The effect of financial literacy, overconfidence, and risk tolerance on investment decision. Journal of Economics, Business, and Government Challenges, 4(01), 61-71.