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THE INFLUENCE OF SELF-CONTROL, OVERCONFIDENCE & FINANCIAL LITERACY ON INVESTMENT DECISIONS OF HIGH RISK ASSETS AMONG THE MILLENNIAL GENERATION AND GENERATION Z

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Abstract

This research is aimed to perform an investigation regarding the capability of financial literacy, including overconfidence bias and self-control proceed a significant influence on shaping Gen Z and Millennials' decision to invest. Furthermore, the research also examines how risk tolerance mediating role in the relationship between independent-dependent variables. By employing quantitative approach, utilizing PLS-SEM modelling, the research gained data which is derived from 168 active investors in the capital market of Indonesia. The findings shown the significant influence of financial literacy, self-control, and overconfidence in shaping risk tolerance, which also turns out as a bridge towards the decision of individuals to invest. In this context, financial literacy highly encourages higher overconfidence distorts the perception of risk, well-examined risk taking, and self-control which able to foster such impulsive actions, which further shape the decisions of investment choices. The findings also offers such major insights regarding young investors' behaviour in the capital market and underlines the requirement to utilize an effective and well-targeted financial education and training of behavioural finance. Those results might be applicable for further literatures looking forward in the development of these theoretical models for further financial professionals, purposed in showing more support to client in investigating the emerging landscape of investment.

***Keywords**: Financial literacy, overconfidence bias, self-control, risk tolerance, investment decisions.*

A. INTRODUCTION

In today's financial markets, individual investors often encounter a variety of psychological and behavioural factors that influence their investment decision. Research shows that individual investment decisions are not only according to the cognitive measures based on the intelligence tests (IQ), numeracy or knowledge tests, but also by considering non-cognitive factors including the self-control (She et al., 2024). According to Kasoga & Tegambwage, (2022) Psychological and behavioural factors are stated as pivotal factors regarding the decision-making process. This study focuses specially on a person's self-control, overconfidence bias, financial literacy as these factors becomes increasingly important in promoting sound financial decisions and reduce the risks associated with impulsive or biased behaviour.

Investment is indeed one of the ways to increase wealth by allocating it into various financial assets, such a stock that have the potential for positive returns. Based on CNBC Indonesia, (2023), The Financial Services Authority (OJK) noted that generation Z and millennials dominate the country's capital market. As of October 22, 2024, the amount of investors contained in capital market reached 14.21 million investors. This number has increased by more than 2 million new investors or 16.81% year to date compared to

the end of 2023. The number of investors in the stock market has increased by 744 thousand throughout 2024.

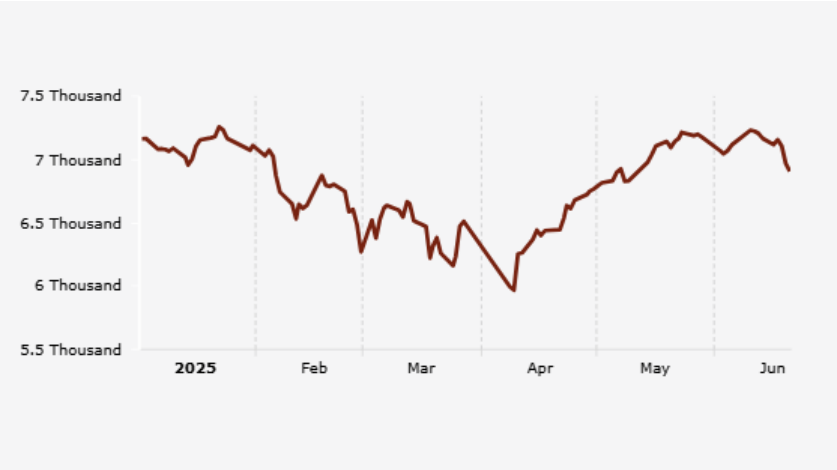

Figure 1. Number of Investors in Indonesian Stock Market

Until August 2024, local investors will still dominate share ownership on the IDX with a percentage of 51.5% compared to 48.5% of foreign investor ownership. Investor regeneration in the Indonesian capital market a with around 79% recorded as investors under 40 years old. This shows that young people are increasingly interested in investment activities. This fact shows that many people are "literate" about investing, but few understand investing completely, the overconfidence phenomenon contributes to situations like this. In 2022, recorded losses due to illegal investments reach IDR. 120.79 trillion, this condition is much higher than in previous years, Rp. 32.08 trillion, such as in 2021-2022 period (CNBC Indonesia, 2023).

The younger generation, especially those belonging to generation Z and millennials, have unique characteristics that distinguish them from previous generations, especially in terms of digital literacy and interest in technology (Zahwa & Soekarno, 2023). Wide access to financial information accessed through investment applications, digital platforms, and social media results in users being quicker in receiving information on investment opportunities, while also having a higher vulnerability to the risk of behavioral bias such as Fear of Missing Out (FOMO) and overconfidence (Pangestu & Karnadi, 2020). Their ability to use technology is not always in line with their in-depth understanding of investment risks, so even though the number of young investors has increased significantly, the quality of their investment decisions still needs to be studied further (Rodiana, 2020).

In response to this, several things can be done so that the younger generation can invest smartly, avoid fear of missing out, and reduce the risk of loss and as the number of retail investors increases its important to examine and analyze various aspects that influence a person’s investment decisions and examining these factors in an integrated model is critical to explaining how investors' behaviour influences their financial decisions, especially as markets become more complex in Indonesia. An article from Bangladesh by (Kumar & Chaurasia, 2024) observed the direct influence of overconfidence towards decisions making. Another article from turkey by (Bayar et al., 2020) researched about the direct influence of financial literacy towards investment decisions. An article in Pakistan by (Adil et al., 2022) observed that risk tolerance as an independent variable towards investment intentions and moderate by financial literacy.

The author decides considering this kind of research model the role of risk tolerance as a mediator between these variables such a self-control, overconfidence bias, financial literacy toward investment decisions has rarely been studied in Indonesia by academicians and still considered a new phenomenon.

In this regard, this new research can be seen in an integrated development model that aims to examine the effects of self-control, overconfidence bias, and financial literacy on investment decisions by including risk tolerance as a mediating variable in the context of the Indonesian capital market. Although previous studies have examined the direct effects of each of these variables separately in other countries such as Bangladesh, Turkey, and Pakistan, there have been few studies in Indonesia that comprehensively examine the dynamic relationship between psychological factors and financial behavior in a single, intact structural model. In addition, the increasingly dominant involvement of young generation Z and millennial investors in the Indonesian capital market makes this local context relevant to be studied specifically.

This research aims to contribute by testing the interaction of these theoretical concepts in a comprehensive model. The results are expected to provide valuable insights for academics and practitioners, especially in improving financial literacy programs and financial behaviour training for investors. For practitioners, understanding these variables can help financial advisors better guide their clients in making investment decisions on high risk assets. For academics, this research will provide a framework for future research exploring the combined impact of behavioural finance and self-control on investment outcomes.

B. LITERATURE REVIEW

Overconfidence and Risk Tolerance

Based on the theory of risk perception, individual's risk tolerance has a close relation on potential risk perception, which is frequently be influenced by their confidence in dealing such outcomes that are uncertain (Almansour et al., 2023; Wang et al., 2021). Need to be highlighted that overconfident individuals have a tendency in perceiving risks as less threatening, and b more manageable than they used to be, because there is such inflated belief regarding their ability in controlling or predicting such outcomes (Ahmad & Shah, 2020; Marwan & Sedeek, 2020). Those confidence biases tend to skew those assessment for the potential downsides, causing them more interest to take a risk which is often be avoided by others.

Regarding how overconfidence bias influence the perception of risk, it tend to reduce the risk severity subjective evaluation, and proceed an increase of risk tolerance (Aren & Nayman Hamamci, 2023; Covey, 2022). In such situations such as decision-making or financial investments are positioned in an uncertain condition, sometimes the overconfident individuals tend to underestimate those probability of proceeding with such adverse outcomes, leading them in adopting high risk tolerances (D. Singh et al., 2024). This dynamic scope underlines how those psychological factor able to influencing behavioural response in facing risks and affecting their behaviour of risk taking. Hence, the higher the overconfidence is, individuals' likelihood in demonstrating increased risk tolerance will also be increased. Hence, the hypothesis is:

H_1: Overconfidence significantly influences risk tolerance.

Financial Literacy and Risk Tolerance

Generally, financial literacy reflects the capability of individual in comprehending and managing different aspects regarding personal finance, such as risk assessment,

investment strategies, and financial plan (Lusardi, 2019; Yuwono et al., 2023). Individuals who tend to pose higher financial literacy level tend to have a stronger risks grasping and proceed with major outcomes in the financial decision-making processes, enabling them to navigate uncertainty in a more effective manner (Lu et al., 2024; Lusardi, 2019). This preparedness and confidence usually resulting to a higher tolerance towards financial risk, since the knowledgeable individuals tend to feel themselves becoming more prepared in dealing with well-informed choices. Previous researches consistently stated a strong correlation of financial literacy in shaping risk tolerance, to then further suggest that individuals with greater financial literation have a more willingness to take calculated risks (Baker et al., 2019; Fong et al., 2021; Marheni et al., 2023). According to those findings, it can be stated about the positive influence between financial literacy and individual's risk tolerance. Hence, the hypothesis is:

H_2: Financial literacy has a significant positive effect on risk tolerance.

Self-Control and Risk Tolerance

Generally, self-control represents the capacity of individuals in performing a management regarding the emotions, impulses, and their behaviours, especially in such situations involving risk evaluation and long-term planning (Hennecke & Bürgler, 2023). Individuals having high self-control degree tend to have a more impulsive actions, leading to the irrational and excessive risk taking. Regarding financial decision making processes, self control enables such thoughtful evaluation on the prospective benefits and their drawbacks, taking a role in moderating one's risk tolerance. Previous researches suggesting that individuals with such strong self-control tend to have more capability in adepting at the immediate gratification for its long-term objectives, resulting to a more cautious and intentional behaviour in facing highly-risk choices (Bermúdez, 2021).

This linked in highly important as the self-control act to help such impulsive drives which leading to the increased risk-taking, encouraging more calculated and rational risks assessment. Other studies highly emphasize the strong role of self-control in performing management of financial uncertainty, indicating its capability in enabling individuals to show their own engagement in such strategic risk-taking without being highly influenced by cognitive biases or emotional impulses (Hashmi et al., 2021; Sekścińska et al., 2021). As the consequences, individuals reflecting a higher self-control have a more tendency in exhibiting the risk tolerance and other risks which are often be aligned with long-term objectives rather than on the short-term willingness. Hence, the hypothesis is:

H_3: Self-control has a significant positive effect on risk tolerance.

Mediation Role of Risk Tolerance in Overconfidence and Investment Decision

Risk tolerance acts as individuals' ability and willingness to enduring such uncertainty investment landscape, especially when dealing with financial decisions (Hemrajani et al., 2024). Regarding investing scope, individuals who exhibit higher overconfidence level, highlighted by the belief regarding to their ability in controlling or predicting outcomes, frequently displayed higher risk tolerance. This condition raises as the individuals who are overconfident tend to underestimate negative outcome likelihood (Y Singh et al., 2023). Hence, higher of the risk tolerance proceed a significant influence towards investment behaviour, resulting the investors in favouring riskier assets in gaining higher return rate.

Prior research has strongly identified the mediator role of risk tolerance in the correlation of overconfidence and the decision making of investment (Maheshwari et al.,

2024). In this context, overconfident individuals have more tendency in overrating their own skills to navigate the financial markets, which elevates risk tolerance. The heightened tolerance to then drives them in engaging to a more often and wider investment activities. In such way. The risk tolerance acts as a clear mechanism through the ability of overconfidence in influencing choices of investment. Hence, the hypothesis is:

H_4: Risk tolerance mediates the relationship between overconfidence and investment decision.

Mediation Role of Risk Tolerance in Financial Literacy and Investment Decision

Risk tolerance reflects the capacity of individuals in handling with uncertainty conditions and financial loss during the process of decision making. Regarding the context of investment, financial literacy is determined as the knowledge of individuals regarding risk assessment and financial principles, which highly contributes the capacity development (Mardikaningsih & Darmawan, 2023). Individuals of the strong financial literacy able to more adopting at the potential objectives of financial choices, enabling them in adopting more informed and rational approach in risk-taking (Molina-Garcia et al., 2023). Those knowledge handles a more measured yet clearer understanding on the financial risks, to then increase the tendency of showing deliberate and confident choices of investment.

Previous findings suggested that risk tolerance handled a mediator role in shaping financial literacy with decision making on investment. Particularly, literate individuals have a high tendency to gain higher awareness and financial risk acceptance, causing them becoming more open in the exploration of wide investment opportunities which promises higher return rates (Liu et al., 2021; Lontchi et al., 2022). Based on its influence in shaping risk tolerance, financial literacy able to show indirect effect in shaping investment behavior through the act of empowering individuals in having a more informed, strategic, and goal-aligned choice of investment. Hence, the hypothesis is:

H_5: Risk tolerance mediates the relationship between financial literacy and investment decision.

Mediation Role of Risk Tolerance in Self-Control and Investment Decision

Risk tolerance reflects how well the individuals capability in managing uncertainty and accept possible losses that might occur when dealing with such financial decisions. In this context, self-control, as it is reflected through the capacity in managing emotions, impulses, and behaviours, assembled a pivotal role in risk tolerance shaping. Individuals who have strong self-control tend to be more cautions and deliberate in financial risks assessment, causing them to avoid impulsive behaviour and get rid from the high-risk ones (Pinjisakikool, 2021). Hence, they would like to adopt the moderate level of the tolerance, by choosing the investment strategies which able to support the long-term stability and in accordance with their financial objectives.

Previous studies indicated that risk tolerance able to act as a mediating role between the correlation of self-control and investment decisions (Rao & Lakkol, 2024). In this context, individuals who have a higher self-control have more tendency in exhibiting a more thoughtful yet balanced risk approach, which further affects their choices of investment. Through the act of minimizing the impulse behaviour, self-control able to enhance individuals' capability in performing effective risk evaluation, concerning with a more calculated financial decisions (Bai, 2023; Hashmi et al., 2021). Hence, the hypothesis is:

H_6: Risk tolerance mediates the relationship between self-control and investment decision.

Risk Tolerance and Investment Decisions

Risk tolerance reflects individuals' capacity and readiness in accepting such uncertain condition and possible losses in exchange for the higher return possibility, causing it acts as a critical factor in financial decision. Investors who poses higher risk tolerance tend to be more ease in taking high volatile investments since they are more equipped in handling the loss potential in exchange of higher rewards (Asad et al., 2022).

The increasing willingness in accepting the risk pursued the expansion of investment options, enabling them in exploring assets which have a higher return rate, including real estates, stocks, and venture capital.

Several researches have underlined a positive correlation of risk tolerance and the shaping of investment behaviours, stating that individuals who poses higher risk tolerance has more likelihood to be proceed a proactive decision of investment (Pinjisakikool, 2021; Rizani et al., 2024). In example, individuals with high risk tolerance tend to show a more engagement in the stock investment and choose the right portfolio which are more volatile and promising high-growth returns (Phan et al., 2022). Hence, the hypothesis is:

H_7: Risk tolerance has a positive effect on investment decisions.

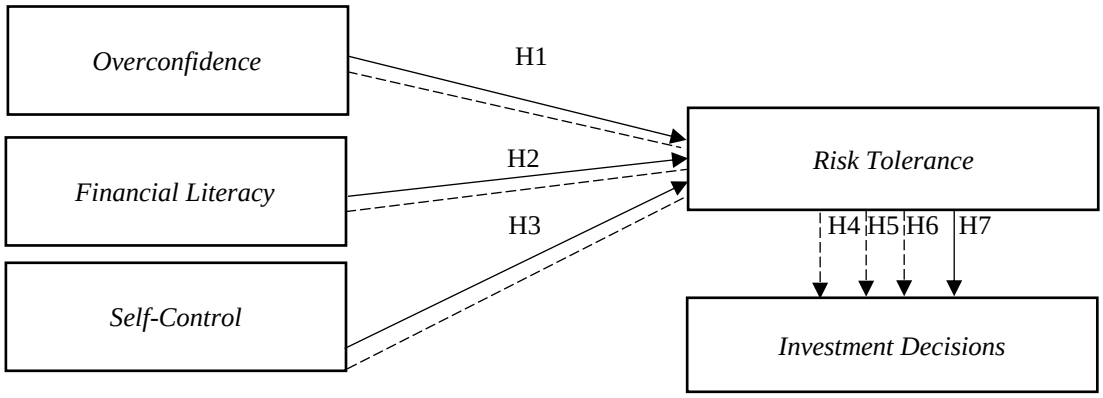

Figure 2. Hypothesized Model

C. RESEARCH METHOD

This study employs a quantitative approach using survey methods to collect data. This approach aims to identify causal relationships among the variables under study through statistical testing. The population for this research consists of individuals actively investing in the capital market (Raut, 2020). The sample selection is according to purposive sampling, targeting respondents with prior investment experience. The study involves 16868 respondents. Data was collected based on the structured questionnaire formulated based on variable indicators adapted from previous studies. The questionnaire includes items measuring financial literacy, overconfidence bias, self-control, risk tolerance, and investment decisions.

The operationalization of variables in this study includes five main variables. The table below presents the indicators used to measure each variable.

Table 1. Measurement

Variables	Indicators		Adapted from
Investment decision	ID1	I make an investment to which looks right to me	Tran Viet & Phan Thanh (2023)
	ID2	I trust my own feelings and reactions when making an investment.	
	ID3	I rely on my instings when making investment.	
	ID4	I would like to choose investment which feels more right rather than with a rational reason	
Financial Literacy	FL1	I have adequate understanding on how I use my money	Azizah & Mulyono (2020)
	FL2	I have adequate understanding of how to manage my credit card usage.	
	FL3	I have the ability to maintain financial recording for expenditure and earnings.	
	FL4	I have ability to manage my money	
	FL5	I have adequate understanding of financial instruments	
	FL6	I have ability to prepare weekly and monthly budget.	
Overconfidence	OB1	I feel confident in evaluating securities prices in my investment portfolio myself	Yang et al. (2021)
	OB2	My past profitable investments are mostly due to my specific investment skills	
	OB3	I have better ability in predicting future price	
	OB4	My investments decisions able to earn higher than the market average return	
Self-Control	SC1	I don’t save as it is too hard for me	Azizah & Mulyono (2020)
	SC2	I enjoy spending money on things which is not practical.	

	SC3	When I get money, I always spend it immediately (within 1 or 2 days).	
	SC4	'I see it, I like it, I buy it' describe me.	
	SC5	'Just do it' describes the way I buy things.	
	SC6	'Buy now, think about it later' describe me	
	SC7	I always failed to control myself in spending my money	
	SC8	I am more concerned with what happens to me in short run than in long run	
	SC9	When I set having goals for myself, I rarely achieve them	
Risk tolerance	RT1	I consider myself as a high-risk taker	Yang et al. (2021)
	RT2	If I unexpectedly received some easy money, I would surely invest a certain amount of money in stocks	
	RT3	I would prefer to invest in stocks rather than keeping my money in a bank account	
	RT4	I consider investment risk as an opportunity	
	RT5	In the investment process, if it happens, I will not mind losing some money	

Source: Tran Viet & Phan Thanh (2023), Azizah & Mulyono (2020), Azizah & Mulyono (2020), Yang et al. (2021)

Data analysis was conducted using the Partial Least Square-Structural Equation Modelling (PLS-SEM) method (Fauzi, 2022). The analysis process involves several stages, starting with validity and reliability testing to ensure the research instrument is valid and reliable. Next, the measurement model (outer model) analysis is conducted to examine the relationship between indicators and latent variables, followed by structural model (inner model) analysis to test the relationships between latent variables (Purwanto & Sudargini, 2021). Hypothesis testing is also conducted to identify the direct and indirect effects of independent variables on the dependent variable through mediating variables (Suprapto, 2023).

This methodology is designed to ensure that the research process is systematic and accurate, providing valid and reliable results to address the research questions. This

approach is expected to explain the relationships between financial literacy, overconfidence bias, and self-control concerning risk tolerance and investment decisions.

D. RESULTS AND DISCUSSION

For this research, the analysis of the distributed questionnaire data was conducted using the SmartPLS software. The evaluation process involved running both outer and inner model assessments to examine convergent validity, discriminant validity, reliability, and the significance of the relationships outlined in the proposed hypotheses.

Table 2. Respondent Profile

Characteristic	Criteria	Total	Percentage
Gender	Male	67	40%
	Female	101	60%
Age	12-27 Tahun	118	34%
	28-43 Tahun	50	61%
Last education	Junior High School	1	1%
	Senior High School	64	38%
	Diploma	30	18%
	Bachelor/Master/Doctoral	73	43%
Income per month	Less than Rp 5.000.000,-	43	26%
	Rp 5.000.001-Rp10.000.000,-	91	54%
	More than Rp 10.000.000,-	34	20%
	Unemployed	0	0%
Type of Investment (s)	Stock	74	45%
	Cryptocurency	44	27%
	Both of them	50	28%

Source: Primary Data (2025)

Table 2 shows the information of the respondents. According to the table, the age range with the most investors are people in the age of 12-27 which is gen Z as the questionnaire accumulated 118 number of respondents within the mentioned age range. Over 43% of the respondent's last education is a bachelor's degree, while 38% are respondents with a senior high school graduate. Over 54% of the respondents had income with Rp 5.000.000, - Rp 10.000.000 per month, 20% of the respondents had a more than Rp 10.000.000. On top of that, based on the questionnaire, 74 respondents chose to invest in stocks, 44 respondents chose cryptocurency and the remaining 50 chose both as an investment choice

Table 3. Collinearity Statistics

Constructs	Variance Inflation Factor (VIF)
Financial Literacy	1,927
Overconfidence	1,790
Risk Tolerance	1,000
Self-control	1,104

Source: Data processed through SmartPLS 4 (2025)

The result of variance inflation factor (VIF) to check whether there are any issues regarding the multicollinearity for the research. Using results from SmartPLS 4, the results can be seen in Table 3. The results show the VIF value of each construct did not

score higher than 5, with financial literacy VIF score a value of 1,927, following overconfidence with 1,790, risk tolerance with 1,000, and lastly self-control with 1,104. This means that financial literacy, overconfidence, risk tolerance, and self-control did not have a multicollinearity issue, thus does not cause a concern on the correlation with other variables.

Table 4. R Square

Variable	R^2	Result
Investment Decisions	0,238	low effect
Risk Tolerance	0,620	strong effect

Source: Data processed through SmartPLS 4 (2025)

R Square test is a fundamental step to assess the effect of dependent variables explained by the independent using a regression model. A high value of R Square, which is the value of 1 implies that independent variables can effectively explain the variability of the dependent variables. Meanwhile, the value of 0 in R Square implies that the independent variables are unable to correlate or explain any of the variability of the dependent variables. Investment decisions variable had the R Square value of 0,238 which indicates that the variable had a moderate explanatory power. Likewise, the R Square score of risk tolerance also indicated a moderate explanatory power as it scored a value of 0,620, a higher than investment decisions and have strong explanatory power.

Table 5. Effect Analysis

Variable	F^2	Result
Financial Literacy -> Risk Tolerance	0,107	Small Effect
Overconfidence -> Risk Tolerance	0,438	Large Effect
Risk Tolerance -> Investment Decisions	0,312	Large Effect
Self-control -> Risk Tolerance	0,027	Very Small Effect

Source: Data processed through SmartPLS 4 (2025)

A F Square test is conducted to measure the impact of independent variables towards dependent variables to show the contribution of each predictor variable to explaining the dependent variable. From the result of effect analysis test conducted in Table 5, it can be known that Self control had a very small effect towards investment decisions with variables score a F Square value below 0,03. A quite similar results are shown with the effect of financial literacy towards risk tolerance with a F Square value of 0,107 indicating a small effect. A comparable result are also shown in the F Square value for overconfidence towards risk tolerance and Risk Tolerance towards investment decisions showing the highest score out of all variables which passed the threshold of ≥0.35 for large effect interpretation.

Table 6. Discriminant Validity Test

Variable	FL	ID	OB	RT	SC
Financial Literacy	**0,798**				
Investment Decisions	0,369	**0,795**			
Overconfidence	0,660	0,667	**0,814**		
Risk Tolerance	0,671	0,488	0,743	**0,792**	
Self-control	-0,290	0,045	-0,117	-0,252	**0,819**

Source: Data processed through SmartPLS 4 (2025)

Referring to Table 6, the discriminant validity was assessed using Fornell-Larcker method and the results shows a good value such as financial literacy scored a value of 0,798, investment decisions with 0,795, overconfidence with 0,814, risk tolerance with 0,792, and lastly self-control with 0,819. The results shows that each construct values are greater than its correlation with any other construct in the model. Thus, based on the values it can be decided that these constructs are different and therefore do not correspond with each other. Overall, the discriminant validity is credible for this measurement model.

Table 7. Discriminant Validity Test

Variable	**FL**	**ID**	**OC**	**RT**	**SC**
Financial Literacy					
Investment Decisions	0,513				
Overconfidence	0,856	0,853			
Risk Tolerance	0,861	0,609	0,873		
Self-control	0,294	0,109	0,131	0,217	

Source: Data processed through SmartPLS 4 (2025)

The discriminant validity test results from HTMT ratio method indicate that all the construct values did not surpass the generally accepted threshold of 0,85 showing that each construct is empirically unrelated from the others. The results range from 0,109 to 0,873 and can be concluded that the discriminant validity results are valid. Therefore, the discriminant validity values of all the construct are reliable, distinct from each other variables and does not overlap concluding a good measurement result.

Table 8. Validity Test Results

Construct Variable	**Code**	**Outer Loading**	**AVE**	**Conclusion**
Investment Decisions	ID2	0,812	0,633	Valid
	ID3	0,782		Valid
	ID4	0,793		Valid
Financial Literacy	FL5	0,831	0,636	Valid
	FL7	0,759		Valid
	FL8	0,850		Valid
Self-control	SC1	0,729	0,670	Valid
	SC2	0,768		Valid
	SC3	0,732		Valid
	SC4	0,842		Valid
	SC5	0,903		Valid
	SC6	0,882		Valid
	SC7	0,850		Valid
	SC8	0,823		Valid
Overconfidence	OC1	0,824	0,662	Valid
	OC2	0,797		Valid
	OC3	0,825		Valid
	OC4	0,809		Valid
	RT1	0,724	0,627	Valid

	RT2	0,814	Valid
Risk Tolerance	RT3	0,751	Valid
	RT4	0,837	Valid
	RT5	0,827	Valid

Source: Data processed through SmartPLS 4 (2025)

Table 8 displays the validity test results and based on the table, majority of the variables tested shows a valid result, with the variable's outer loading ranges between 0,729 to 0,903. The AVE results are varied on each variable but did not score lower than the accepted threshold of 0,5 with investment decisions of 0,633, self-control of 0,670, overconfidence of 0,662, and lastly risk tolerance with the score of 0,627. From the AVE results, it can be concluded that each indicator is qualified of representing the tested variable as each AVE is score higher than 0,5 which proves that the construct explains at least 50% of the variance in its observed indicators, suggesting good convergent validity. This indicates that respondent's answers were reliable and clear.

Table 9. Reliability Test Results

Construct Variable	Cronbach's Alpha	Composite Reliability	Conclusion
Financial Literacy	0,713	0,840	Reliable
Investment Decisions	0,713	0,838	Reliable
Overconfidence	0,831	0,887	Reliable
Risk Tolerance	0,851	0,893	Reliable
Self-control	0,938	0,942	Reliable

Source: Data processed through SmartPLS 4 (2025)

Table 9 shows the Cronbach's Alpha score and composite reliability score. From the table, Cronbach's Alpha scored values between 0,713 to 0,938 showing an excellent to acceptable score results. This explains that the values are closely related as a group and produce equal contribution of all variables to the construct. Additionally, the composite reliability score results also showed an excellent to good value interpretation with the value ranges between 0,840 to 0,942. The result from testing the reliability of each variable shows that the research can be trusted, and this outcome indicated that the measurement tools used in the research is reliable and accurate therefore can be used as a foundation for subsequent testing.

The researcher also employed inner model testing, consisting of direct effect test (path coefficients) and indirect effect test to analyse whether or not there is a significant relationship between the variables.

Table 10. Path Coefficients (Direct Effects)

Variable	Coefficients	t-value	p-value	Result
Financial Literacy -> Risk Tolerance	0,280	1,696	0,090	Insignificant
Overconfidence -> Risk Tolerance	0,546	3,772	0,000	Significant
Risk Tolerance -> Investment Decisions	0,488	4,718	0,000	Significant
Self-control -> Risk Tolerance	-0,107	1,188	0,235	Insignificant

Source: Data processed through SmartPLS 4 (2025)

Based on the results in Table 10, the variable Overconfidence has a positive and significant effect on Risk Tolerance, with a coefficient value of 0.546 and a p-value of 0.000 (< 0.05). This finding is consistent with prior research by Ahmad & Shah (2020) and Aren & Nayman Hamamci (2023), which suggests that overconfident individuals tend to perceive risk as more manageable due to their excessive belief in their own decision-making abilities. Such individuals able to interpret uncertain investment environments as opportunities rather than threats, in which then increase their willingness in tolerating the financial risk. This also in line with findings proposed by Yulianis & Sulistyowati (2021), suggesting that psychological traits such as overconfidence able to serve as an importantpredictors of the risk-related behaviour, especially in such fast-paced, technology-driven markets where the decision-making processes is influenced by information overload as well as instantaneous access to trading platforms. On the other words, the higher the overconfidence level of an individual, the higher their tolerance toward investment risks (Adielyani & Mawardi, 2020; Samanez-Larkin et al., 2020).

Risk Tolerance also shows a significant positive effect on Investment Decisions, with a coefficient of 0.488 and a p-value of 0.000. This supports the findings of Asad et al. (2022) and Phan et al. (2022), who observed that individuals with high risk tolerance are more willing to engage in proactive and potentially high-return investment behaviors. Higher tolerance risk implies a higher psychological readiness to face potential loss or uncertainty, which translates greater openness toward equities, risky assets, and volatile ones but potentially lucrative investment options (Bai, 2023; Rizani et al., 2024). This relationship is particularly relevant in the context of modern financial markets, where the accessibility of investment platforms and the prevalence of real-time trading apps have lowered the entry barriers for retail investors (Pinjisakikool, 2021). Investors with high risk tolerance may view market fluctuations not as deterrents but as strategic opportunities, thus making quicker and bolder investment decisions (Lusardi, 2019). Furthermore, risk-tolerant individuals are tend to more diversify their portfolios, adopt long-term investment mindsets, and resist emotional reactions to short-term market downturns, which all contributing significantly to more rational yet profitable investment outcomes (Hashmi et al., 2021).

Meanwhile, the variables Financial Literacy and Self-Control do not demonstrate a significant influence on Risk Tolerance, with p-values of 0.090 and 0.235 respectively, exceeding the significance threshold of 0.05. This result contrasts with some previous studies (e.g., Lusardi, 2019; Hashmi et al., 2021) which found that both financial literacy and self-regulation contribute to better risk evaluation.

Table 11. Indirect Effects

Variable	Coefficients	t-value	p-value	Result
Overconfidence -> Risk Tolerance -> Investment Decisions	0,266	2,202	0,028	Significant
Financial Literacy -> Risk Tolerance -> Investment Decisions	0,137	1,898	0,058	Insignificant
Self Control -> Risk Tolerance -> Investment Decisions	-0,052	1,052	0,293	Insignificant

Source: Data processed through SmartPLS 4 (2025)

The results of the indirect effect testing, as showed in Table 11, show that Risk Tolerance significantly mediates the relationship between Overconfidence and Investment Decisions, with a coefficient of 0.266, t-value of 2.202, and p-value of 0.028 (< 0.05). This indicates that overconfident individuals, who generally believe they can

control or predict investment outcomes, tend to exhibit higher risk tolerance, which subsequently leads to more aggressive or frequent investment behaviors. This finding is in line with the studies by Maheshwari et al. (2024) and Singh et al. (2023), which highlight the mediating role of risk tolerance in connecting psychological biases to investment behavior.

However, the mediating effect of Risk Tolerance between Financial Literacy and Investment Decisions was not statistically significant, with a p-value of 0.058, slightly above the 0.05 threshold. This suggests that although financially literate individuals may understand financial risks, their willingness to take those risks may not necessarily increase (Liu et al., 2021; Nadhifah & Anwar, 2021). Similarly, Self-Control does not significantly influence Investment Decisions through Risk Tolerance, as indicated by a p-value of 0.293. The findings suggest that while individuals with strong self-control tend to demonstrate such disciplined behaviors in managing their spending and savings, which is not necessarily lead to more calculated risk-taking in their investment decisions (Bai, 2023; Hashmi et al., 2021).

As the conclusion, one of the three paths of mediation are examined, only regarding the relationship handled between investment decisions and overconfidence biases through the risk tolerance was highly supported. This highlighted the necessity to consider those psychological factor when employing a study based on Generation Z and Millennials' investment behaviour.

E. CONCLUSION

The study findings deliver such theoretical and practical contributions in order to increase the understanding related to investing behaviours among Generation Z as well as Millennial investors in Indonesia. This test perform a testing, in order to gain important insights regarding major factors influencing investment decisions among them. As the theoretical context, this research underlines the ultimate role of psychological constructs, especially related to risk tolerance as well as overconfidence, in pursuing investment decisions, perform such reaffirmation on key assumptions regarding the behavioural finance theory which the investor behaviour tend to not only be rational, but is highly influenced by cognitive biases. The indirect and significant effect of overconfidence through risk tolerance highly emphasizes the importance of integration between psychological-emotional dimensions into financial decision making model, as assembled and obtained in previous researches, for example the research employed by Ahmad & Shah (2020) and Yang et al. (2021). In contrast, non-significant relationship occurred between financial literacy and self-control on risk tolerance deliver new challenges to conventional economic assumptions which rational knowledge and behavioral discipline are sufficient to explain risk attitudes, highly aligned by Lusardi (2019) and Hashmi et al. (2021) statement, that argued that financial competence unable to directly influence one's risk related decision objectives.

Regarding the practical context, the result suggest that investor, especially to those considered as the younger demographics, should be more aware to their cognitive biases, which is one of them is related to overconfidence, which drive toward the high-risk behaviour of investment. Financial advisors and fintech platforms targeting Millennials and Gen Z must tailor their services to include behavioral assessments and personalized risk profiling that can temper impulsive or overly confident investment tendencies. For government bodies and regulators, these insights highlight the urgent need to redesign financial literacy programs with a stronger behavioral component, beyond basic financial knowledge, in order to address distortions and construct emotional intelligence around

investment risks. Programs initiated by financial authorities such as OJK and Bank Indonesia should integrate behavioral education, especially through simulation-based learning, gamified decision tools, or psychoeducational workshops in enhancing the quality of decision.

Meanwhile, this study is not without limitations. The usage of self-reported questionnaires should introduce response biases, and the sample, while reflective of young investors, may not capture the full diversity of socioeconomic and cultural backgrounds which existing within Indonesia's youth population. Hence, future research should consider employing longitudinal or experimental designs to establish causal relationships more robustly and to examine how behavioral traits evolve over time. Furthermore, expanding the research scope to include variables such as digital platform usage, peer influence, as well as socioeconomic status could offer wider insights into the multi-dimensional nature of investment behavior. As the financial landscape becomes increasingly digitized and accessible, it becoming more important to continuously explore how technological, psychological, and social factors in better shaping financial decision-making in emerging markets.

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