

Factors Influencing an Individual's Investment Decisions: An Analysis of Risk Tolerance as a Mediating Variable

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ARTICLE INFO

Article history :

Received:

01 September 2025

Revised:

30 Desember 2025

Accepted:

06 Januari 2026

ABSTRACT

This study examines the influence of financial literacy, overconfidence, firm image, and self-control on investment decisions, with risk tolerance included as a mediating variable for financial literacy and overconfidence. Data were collected from 180 respondents using a questionnaire and analyzed through Structural Equation Modelling (SEM). The findings indicate that financial literacy, overconfidence, and self-control have a positive impact on individual investment decisions. In contrast, firm image and risk tolerance show a positive but insignificant effect. Furthermore, risk tolerance does not mediate the relationship between financial literacy and overconfidence on investment decisions. These results can help investors better understand their capabilities and personality traits when making financial decisions. Additionally, the study highlights the importance for policymakers and financial educators to improve financial literacy and address behavioral aspects influencing investment behavior. Enhancing both knowledge and mindset is essential for empowering individuals to make more informed and rational investment choices.

Keywords: Financial literacy; Overconfidence; Firm image; Self-control; Risk tolerance

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INTRODUCTION

When talking about investment and how someone decides about investments, there are aspects that influence a person's choice. A few of those aspects are a person's understanding about finance, their tolerance towards financial risk and their knowledge about a firm's image. However, investment decisions are not only influenced by the investor's knowledge, risk tolerance, and the firm's image. More than that, someone's behavioral bias could also play a role in making an investment decision. This study focuses on a person's overconfidence bias. A study conducted by Adil et al., (2022) reveals that male investors are more overconfident in making an investment decision than female investors. And a behavioral bias such as overconfidence could likely be the main influence of why investors make frequent investments or trading choices, as it is found in research done by Shunmugasundaram & Sinha, (2024). In addition, an investor's demographic factors also play a role in making an investment decision, which in this article focuses on age, income, status, etc. Research done by Sharma, (2020) reveals that demographic profiles such as gender, age, education qualification, and income class significantly impact an individual's investment decision.

Investment is known to be a form of acquiring items or various forms of assets to gain income. In Indonesia alone, there are 13 million Indonesian capital market investors with an increase of 863 thousand new investors from the previous year of 2023 (Nurahmad, 2024). More than that, throughout the year of 2024 there are approximately 744 thousand new stock investors (Simon, 2024). This shows that more and more Indonesian citizens are interested in investment activities. Besides that, based on a survey conducted by the Indonesia Financial Services Authority [OJK] & Statistics Indonesia [BPS]), (2024), 15–17-year-old Indonesian teenagers have the lowest financial literacy with only 51.7 index in 2024. This is a serious issue and a topic that needs to be discussed and assessed as these teenagers are the next generation of adults in the near future. Snapcart, (2020) conducted a TASC survey on various Indonesians with different ages, socioeconomic status, and geography to understand how the citizens save their money, and it is found that over 22% of Indonesians save their money in investments, with 13% for mutual funds, 9% for stocks and bonds, and an 85% likeliness for men to invest in stocks, bonds, and mutual funds than women. Therefore, it is important to examine and analyze various aspects that influence an individual's investment decisions so that people of all ages can make wise investment choices to gain profit.

Countries like India and Pakistan have conducted numerous studies regarding this issue, and the results show multiple different answers. Compared with those countries, Indonesia has yet to dive into this issue, which could cause Indonesian citizens, especially young people to invest their money unwisely. A research from India by Kumar & Chaurasia, (2024) observed the direct influence of overconfidence towards investment decisions. Another research from India by Adil et al., (2023) analyzed about the direct influence of financial literacy towards investment decisions. A research done by Pakistan university students, it is found that observed the variable of firm image towards investment

decision (Zulqarnain Safdar et al., 2020). Kasoga & Tegambwage, (2022) from a Tanzanian university studied about the impact of self-control towards investment choices. However, in this study the author decided to add risk tolerance as the mediator between financial literacy and overconfidence towards investment decisions, considering this kind of research model is still yet to be studied intensively in Indonesia by academicians and still considered quite a new phenomenon.

A study conducted by Ambarwati et al., (2024) states that overconfidence can lead individual to make low-risk perception towards an investment decision. The study also mentions that overconfidence in Indonesian millennial investors can be overcome by enhancing financial literacy and education. More than that, an individual's overconfidence may impact their risk tolerance since investors with high sense of self-assurance think highly of their own capability, which could cause ignorance towards important facts to consider when making an investment decision. Considering the stock market is always changing in basic values, market prices, and market databases, investors may make decisions that overreacts according to the market swings (Yuwono et al., 2023). At the same time, it is also important to figure out how individual with certain financial literacy level tolerate their investment risk. Hence, there are several goals from this study. First, this paper aims to analyze the influence of a firm's image and an individual's self-control on investment decisions. Additionally, this study also seeks to examine risk tolerance as mediators between financial literacy, and overconfidence towards investment decisions. This study uses Theory of Planned Behavior (TPB) as a conceptual framework to explain and predict human behavior in a variety of behavioral domains. According to Ajzen, (2020), who define TPB as the behavior of interest in terms of its target, the action involved, the context in which it occurs.

THEORETICAL FRAMEWORK AND EMPIRICAL STUDIES

Financial Literacy and Risk Tolerance

Budiman et al., (2025) stated that financial literacy refers to the ability to understand and use various financial skills, which are required for making well informed investment decisions. According to Johri et al., (2023) financial literacy can be defined as the understanding that equips them with relevant financial information to manage their resources. It is also stated from the study that financial literacy helps individuals to make wise and timely financial choices to enhance wealth and savings, and at the same time enables them to lessen the risk of financial crisis. Sari & Widodo, (2022) states that financial literacy skills are useful for reading, managing, and analyzing, as well as communicating financial conditions and their resulting impacts. Risk tolerance refers to an investor's capacity to endure unfavorable changes or deviations from expected results (Budiman, Angelina, et al., 2025). Meanwhile, risk tolerance is defined by Investopedia (n.d.) as a level of risk that an investor is willing to take given the unpredictability in investment activities. It states that the type and number of investments are usually determined by the risk tolerance of the investor.

Song et al., (2023) discovered a significantly positive relation between financial literacy towards risk tolerance. From the study it is found that financial literacy triggers financial risk tolerance of investors, enabling them to make sturdy and solid financial decisions. Likewise, a research done by Bayar et al., (2020) also discovered a significant impact of financial literacy towards risk tolerance. The research indicates that the higher one's financial literacy level, the more possible it is for the individual to make more purposeful decisions about financial investments. Therefore, the study hypothesizes that: H1: Financial literacy directly influences risk tolerance

Overconfidence and Risk Tolerance

Overconfidence is one of an individual's psychological traits, but exerting it too much can be dangerous (Bouteska et al., 2023). According to Raheja & Dhiman, (2020), overconfidence can be defined as when the financial specialists become overbold while foreseeing the future, believing that they can speculate the future better. The authors also discovered from their research that overconfidence significantly impacts an individual's investment choices. The study also indicates that overconfidence can make financial specialists become careless about their own presumption choices, which leads to being too confident about their performance than others because they believe their speculation will always be correct. Meanwhile, Hossain & Siddiqua, (2022) mentioned that overconfidence is an unjustifiable and mostly illogical confidence that an investor has in their own potential to predict the market. The authors also found that overconfidence is identified as one of the psychological biases that impacts an investor's actions in making irrational decisions. Therefore, overconfidence often leads investors to make quick judgment about their investment choices. On the other hand, an individual's high sense of confidence could lead him to overlook risk that may occur during investment activities. Rani et al., (2024) analyzed that overconfidence had an impact on risk tolerance. The study indicates that individuals who exhibit overconfidence attitude are more likely to overestimate their capabilities and therefore draw them to a riskier investment. Given the explanation above, this study hypothesizes that:

H2: Overconfidence directly influences risk tolerance

Firm Image and Investment Decisions

A company's image includes discussion about perceptions of the firm's products or services, firm status or reputation, the firm's morals, and the firm's action towards solving environmental issues (Sachdeva & Lehal, 2023). Firm image and identity remain the most valuable assets which provide basis to gain competitive advantage in the market (Sachdeva & Lehal, 2023). Naveed et al., (2020) states in their research that the reputation of a company could influence an investor's decision to buy or sell the stock of the company. Wijaya & Zunairoh, (2021) mentions in their study results that people feel assured when investing their money in corporations or investment instruments that are operate smoothly, because good performing firms will certainly have a bigger chance to

provide benefits. Investors tend to want to invest their money in a company that brings positive outcome and has good reputations, therefore the hypothesis is:

H3: Firm image directly influences investment decisions

Self-control and Investment Decisions

Self-control drives individuals to overthrow their current biggest desires, that would eventually dictate behavioral decisions, in favor of a currently less sought after long-term goal (Goschke & Job, 2023). Investors with high self-control will usually save money, getting themselves ready to face unexpected situations which requires unexpected expenses, and also maintain enough money to invest (Kasoga & Tegambwage, 2022). The same authors also found that self-control directly has an influence on investment decisions. Another research done by Sekścińska et al., (2021) showed that investor's self-control gives effect towards their propensity to invest as well as their willingness to take investment risk. In the study, the results showed that investors with higher self-control tend to have a higher propensity to invest and a lower propensity to take investment risks. For this reason, this study makes up the hypotheses of:

H4: Self-control directly influences investment decisions

Mediation role of Risk Tolerance in Financial Literacy and Investment Decisions

A study conducted by Aren & Nayman Hamamci, (2020) reveals that although men have a higher tendency to take risks than women, financial literacy is seen to give an impact on this. The study concluded that when an investor has risky investment intentions, gender does not play a role in their investment preferences because they evaluate their financial literacies equally. Song et al., (2023) indicates in their research that risk tolerance partially mediates the connection between financial knowledge and financial behavior. As a result, the hypothesis is:

H5: Risk tolerance mediates financial literacy with investment decisions

Mediation role of Risk Tolerance in Overconfidence and Investment Decisions

Kasoga, (2021) found that risk tolerance mediates significantly and positively the impact of overconfidence towards investment decisions. He further states that investors who are overconfident could tolerate risk, which leads to a positive effect on investment decisions. Another study by Parveen et al., (2020) reveals that overconfidence drives investors to put their trust too much on the information they hold, misjudge their risk-taking behavior, and exaggerate their capability to control and handle different events. According to the findings from Soraya et al., (2023), investors with overconfidence tendencies will give influence towards their investment decision through risk tolerance. Overconfident investors tend to be more lenient in accepting potential risks and induce them to immediately make decisions. Investors place great value on their approach to investing, which involves having confidence in their investment decisions

because when investors have a solid grasp of their abilities in the investment field, their motivation to participate actively in investment activities is enhanced (Marheni et al., 2023). From the discussion above, the author proposed the hypothesis of:

H6: Risk tolerance mediates overconfidence with investment decisions

Risk Tolerance and Investment Decisions

Personality traits have a positive impact on risk tolerance which then impacts an individual's investment decisions (Mukhdoomi & Shah, 2023). Therefore, the study concluded that it is important to understand their personality tendency before making an investment choice so that they will not end up in distress if they choose a higher risk appetite than their preferences. Investors who are willing to purchase stocks show that they are ready to face the risk (Kasoga, 2021). A further study by Khan et al., (2021) also shows that risk tolerance positively affects the investment intention of an individual, which shows that individuals who have a higher risk tolerance are more likely to invest than those who have a lower risk tolerance. Investors who are willing to take higher risks makes their aim to attain a higher return from the market and thus affect their investment performance (ul Abdin et al., 2022). For those reasons, this study hypothesizes that:

H7: Risk tolerance directly influences investment decisions

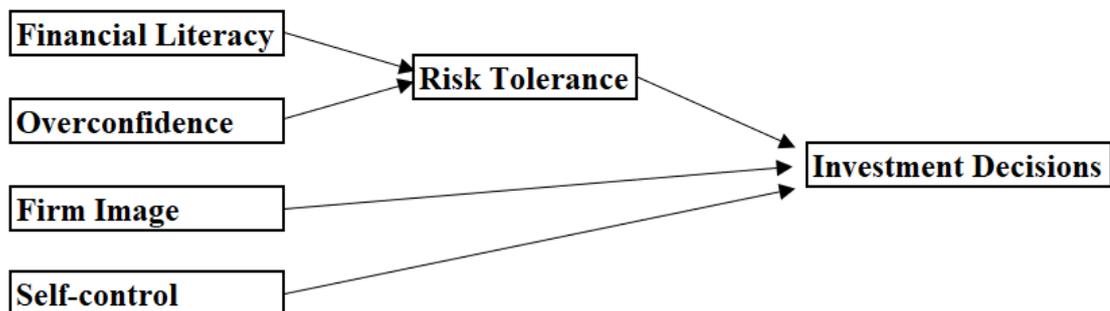


Figure 1. Research Model

RESEARCH METHODS

This study uses a cross-sectional research method to analyze the hypothesized model. Primary data was used in this study as according to Cerar et al., (2021) defines primary data as raw data that provides raw evidence and information about an object studied. In this study, the author collected data by distributing structured research questionnaires in the form of Google Forms and snowball sampling was used as a sampling technique. In this sampling technique, the first line respondents can refer people within their reach who also fit the requirements to be a respondent. This way, the sample size

increases as referrals are included, forming a chain-like pattern. The questionnaire for this research was distributed through various social media platforms such as WhatsApp chats, Instagram, and Line. In the google form questionnaire, there are 7 sections, with 6 sections referring to each of the research variable and the first section as the source of respondent's demographic details. Every question had five response options, weighted from 1 to 5, to indicate the respondent's level of agreement to the questions statement and the higher the points mean higher the agreement score. By using the G Power software as a power analysis, with the parameters to an effect size of 0.15, an alpha level of 0.05 and a desired power of 80%, this research concluded that the minimum number of respondents needed are 152 respondents. However, during the respondent collection period, the questionnaire collected 180 respondents, which then those responses are tested for the validation and significance of the research. This research utilizes Partial Least Squares-Structural Equation Modeling (PLS-SEM) method as a data processor to identify the significance of each hypothesis and validity and reliability checking, as well as other statistics data needed.

RESULTS AND DISCUSSIONS

Table 1. Characteristics of Respondents

Characteristic	Criteria	Total	Percentage
Gender	Male	84	47%
	Female	96	53%
Age	≤ 20 Years	61	34%
	21-30 Years	110	61%
	31-40 Years	8	4%
	≥ 41 Years	1	1%
Last education	≤ Junior High School	1	1%
	Senior High School	105	58%
	Bachelor	4	2%
	≥ Postgraduate	70	39%
Income per month	Less than Rp 2.000.000,-	14	8%
	Rp 2.000.001-Rp 4.000.000,-	26	14%
	More than Rp 4.000.001,-	113	63%
	Other income or not fixed	27	15%
Type of Investment (s)	Stock	90	50%
	Mutual Funds	40	22%
	Stock, Mutual Funds	50	28%

Source: Primary data (2025)

Table 1 shows the demographic profiles and information of the respondents. According to the table, the age range with the most investors is 21-30 as the questionnaire accumulated 110 number of respondents within the mentioned age range. Following the

second age criteria after that is respondents with the age range of ≤ 20 , which accumulated 61 respondents, and through the table it can be concluded that the number of investors lessens as the age progresses. Over 105 respondents had their last education at the senior high school level, while 70 others are respondents with a bachelor's degree. Over 113 respondents had higher income than Rp 4.000.000, - per month, 27 respondents had an unfixed monthly income and 26 other respondents had income in between the ranges of Rp 2.000.001, - to Rp 4.000.000, -. On top of that, based on the questionnaire, 90 respondents chose to invest in stocks, 40 respondents chose mutual funds and the remaining 50 chose both as an investment choice.

Table 2. Common Method Bias

Constructs	Variance Inflation Factor (VIF)
Financial Literacy	1,385
Firm Image	1,451
Overconfidence	1,385
Risk Tolerance	1,588
Self-control	1,176

Source: Data processed by researchers (2025)

The result of variance inflation factor (VIF) or common method bias is used to check whether there are any issues regarding the multicollinearity for the research. Using results from PLS-SEM, the results can be seen in table 2. The results show the VIF value of each construct did not score higher than 5, with financial literacy has a VIF score of 1,385, following firm image with 1,451, overconfidence with 1,385, risk tolerance with 1,588, and lastly self-control with 1,176. This means that financial literacy, firm image, 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 3. Validity Test Result (Loading Factor & AVE)

Construct Variable	Code	Outer Loading	AVE	Conclusion
Firm Image	FI1	0,806	0,767	Valid
	FI2	0,905		Valid
	FI3	0,912		Valid
Investment Decisions	ID2	0,899	0,709	Valid
	ID3	0,908		Valid
	ID4	0,703		Valid
Financial Literacy	FL1	0,617	0,529	Valid
	FL2	0,719		Valid
	FL5	0,668		Valid

	FL7	0,762		Valid
	FL8	0,850		Valid
	SC1	0,828		Valid
	SC2	0,861		Valid
	SC3	0,902		Valid
	SC4	0,826	0,732	Valid
Self-control	SC5	0,863		Valid
	SC6	0,897		Valid
	SC7	0,879		Valid
	SC8	0,863		Valid
	SC9	0,777		Valid
	OC1	0,832		Valid
Overconfidence	OC2	0,866		Valid
	OC3	0,802	0,639	Valid
	OC4	0,816		Valid
	RT1	0,785		Valid
	RT2	0,739		Valid
Risk Tolerance	RT3	0,681	0,563	Valid
	RT4	0,782		Valid
	RT5	0,758		Valid

Source: Data processed by researchers (2025)

Table 3 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 0,617 to 0,912. Convergent validity for each construct was confirmed through Average Variance Extracted (AVE) values exceeding 0,50 (Hair et al., 2021). The AVE results are varied on each variable but did not score lower than the accepted threshold of 0,5 with firm image score of 0,767, investment decisions of 0,709, financial literacy of 0,529, self-control of 0,732, overconfidence of 0,639, and lastly risk tolerance with the score of 0,563. 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 0,50 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 4. Discriminant Validity Test (Fornell-Larckel)

Variable	FL	FI	ID	OC	RT	SC
Financial Literacy	0,727					
Firm Image	0,458	0,876				
Investment Decisions	0,233	0,269	0,842			
Overconfidence	0,527	0,530	0,552	0,829		
Risk Tolerance	0,508	0,555	0,338	0,641	0,750	
Self-control	0,287	0,257	0,558	0,615	0,383	0,856

Source: Data processed by researchers (2025)

Referring to table 4, the discriminant validity was assessed using Fornell-Larckel method and the results shows a good value such as financial literacy scored a value of 0,727, firm image with 0,876, investment decisions with 0,842, overconfidence with 0,829, risk tolerance with 0,750, and lastly self-control with 0,856. 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 5. Discriminant Validity Test (HTMT Ratio)

Variable	FL	FI	ID	OC	RT	SC
Financial Literacy						
Firm Image	0,598					
Investment Decisions	0,279	0,314				
Overconfidence	0,633	0,633	0,679			
Risk Tolerance	0,626	0,675	0,412	0,754		
Self-control	0,335	0,283	0,636	0,686	0,436	

Source: Data processed by researchers (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 0,279 to 0,754 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 6. R Square

Variable	R²	Result
Investment Decisions	0,335	low effect
Risk Tolerance	0,451	moderate effect

Source: Data processed by researchers (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 0,335 which indicates that the variable had a low explanatory power. Meanwhile, the R Square score of risk tolerance indicated a moderate explanatory power as it scored a value of 0,451, a bit higher than investment decisions and almost approaching strong explanatory power.

Table. 7 F Square

Variable	F²	Result
Financial Literacy -> Risk Tolerance	0,073	Small Effect
Firm Image -> Investment Decisions	0,008	Very Small Effect
Overconfidence -> Risk Tolerance	0,352	Large Effect
Risk Tolerance -> Investment Decisions	0,010	Very Small Effect
Self-control -> Investment Decisions	0,317	Medium Effect

Source: Data processed by researchers (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 8, it can be known that firm image and risk tolerance had a very small effect towards investment decisions with both variables score a F Square value below 0,02. A quite similar results are shown with the effect of financial literacy towards risk tolerance with a F Square value of 0,073 indicating a small effect. In contrast, self-control effect towards investment decisions scored a higher impact result with the F Square value of 0,317 which passed the threshold of ≥ 0.34 for medium effect interpretation. A comparable result is also shown in the F Square value for overconfidence towards risk tolerance, showing the highest score out of all variables with the F Square score of 0,352.

Table. 8 Reliability Test Results

Construct Variable	Cronbach's Alpha	Composite Reliability	Conclusion
Financial Literacy	0,776	0,847	Reliable
Firm Image	0,851	0,908	Reliable
Investment Decisions	0,790	0,878	Reliable
Overconfidence	0,850	0,898	Reliable
Risk Tolerance	0,806	0,865	Reliable
Self-control	0,954	0,961	Reliable

Source: Data processed by researchers (2025)

Table 8 shows the Cronbach's Alpha score and composite reliability score. From the table, Cronbach's Alpha scored values between 0,776 to 0,954 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 0,847 to 0,961. 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.

Table. 9 Path Coefficients (Direct Effects)

Variable	Coefficients	t-value	p-value	Result
Financial Literacy -> Risk Tolerance	0,235	3,093	0,002	Significant
Firm Image -> Investment Decisions	0,085	0,886	0,376	Insignificant
Overconfidence -> Risk Tolerance	0,517	8,854	0,000	Significant
Risk Tolerance -> Investment Decisions	0,100	0,869	0,385	Insignificant
Self-control -> Investment Decisions	0,498	7,847	0,000	Significant

Source: Data processed by researchers (2025)

Table 5 shows the result of direct effects testing, in which according to the data test, financial literacy has a significant positive impact on risk tolerance as the p-value scores below 0,005 and the t-value of 3,093. This results further explains the behavior investors take according to their financial literacy level, whereas investors with a higher financial knowledge tend to be more cautious in their risk tolerance. This result complements the findings from Bayar et al., (2020), which states that to make informed financial decisions, individuals need a solid understanding of financial products, the risks and returns they entail, and how financial markets operate. The research also added that financial literacy is expected to play a key role in shaping a person's willingness to take financial risks. As individuals become more financially literate, they are more likely to make thoughtful and informed investment choices, which can lead to greater risk tolerance and therefore correlates with the TPB used in this study.

The influence of firm image on investment decisions, however, proved to have a positive but insignificant effect whereas firm image is not a forceful variable to directly influence investor's investment decisions. Further explanations are that both variables consistently move in the same direction but did not produce a statistical outcome and could be because several reasons. Although investors prefer a professional company with a more qualified and desirable successes, those are not the main reason as to why investors decide to invest. It could be because of external factors such as the unpredictable outcome in the market, social media trends and effects, etc. Based on Dwi Rakhmatulloh & Asandimitra, (2019), the reason why firm image does not affect investment decisions could be caused by respondents ignoring information regarding the firm position in the market or in other

words, respondents did not know whether the firms are newcomers, market followers, or market leaders, they did not know about the products or services the firms provide, and also they have no knowledge about the firm's work ethics. These reasons explain the respondent's answers as to why firm image does not affect their decisions in investment.

Table 9 shows that the statistics of t-value is 8,854 and the p-value scores 0,000 which shows that overconfidence have a significant positive influence on risk tolerance. Overconfidence is a personality trait influenced by emotional bias and could lead investors to make riskier investments decisions without a thorough consideration (Soraya et al., 2023). The findings also complement the results from a study by Rani et al., (2024) and Neupane, (2021) which concludes that investors who exhibit overconfident attitude are more likely to display higher risk tolerance. What's more, Asaad, (2020) mentions in the research that the line for people with high risk tolerance is steeper than the one for those with low risk tolerance which means that overconfidence affects margin buying in different ways depending on how much risk someone is willing to take, hence when both overconfidence and risk tolerance are high, they work together to increase the amount of buying even more.

From the table, it shows that the p-value score of risk tolerance influence towards investment decisions is 0,385 and the t-value had a score of 0,869 which implies that risk tolerance did not give an impact towards investment decisions. This result means that risk tolerance in investment decisions cannot directly influence the decision making of investors because the respondents are more likely to choose safer investments which makes them conservative investors and not risk taker investors. The results from this research is equivalent with the results conducted by Putri et al., (2023). Lidyana, (2024) mentions that there has been an increase in fraud causes under the guise of investment. This encourages people to be more wary and careful in making investment decisions as well as opening a door to look for alternative ways to gain profit (Yulianis & Sulistyowati, 2021).

Lastly, the table shown above shows the t-value of 7,847 and p-value of 0,000 which insinuated that self-control gives a significant impact towards investment decisions. Investors who can control themselves and their savings are more likely to be able to invest well since they need money to invest, and the results concur with previous findings (Kasoga & Tegambwage, 2022; Sekścińska et al., 2021). Furthermore, a study by Gunawan & Said, (2024) shows that investors with good self-control tend to make wise investment choices and are more effective in achieving their financial goals. Investors with strong self-control are more likely to set aside money, be ready for unexpected costs, and have sufficient funds to make investment decisions (Kasoga & Tegambwage, 2022). This indicates that investors with a high level of self-control tend to exhibit disciplined behavior, adhere to financial plans, and resist impulsive decisions—aligning well with the principles of the TPB employed in this study.

Table. 10 Path Coefficients (Indirect Effects)

Variable	Coefficients	t-value	p-value	Result
Overconfidence -> Risk Tolerance -> Investment Decisions	0,046	0,853	0,394	Insignificant
Financial Literacy -> Risk Tolerance -> Investment Decisions	0,022	0,751	0,453	Insignificant

Source: Data processed by researchers (2025)

Both mediating effects shows insignificant positive results. This suggest that both effects do not lessen the strength of the relationship between the variables from the model and does not give an impact. Based on a research by Anifa & Soegiharto, (2023) each investors had different overconfidence levels which is determined by their own risk tolerance and mindset, hence investors who likes to take on riskier investments had a more aggressive and speculative behavior in viewing investment risk. The study results also add that investors who tends to avoid risk typically approach investment risks conservatively. As a result, investment experience may reinforce overconfidence, without significantly improving risk assessment or leading to better investment decisions.

The mediating effect of risk tolerance towards financial literacy and investment decisions showed a p-value score of 0,453 which also indicate an insignificant result. Investors who are risk averse tend to be more conservative in their view of investment risk. This suggests that financial knowledge may influence investment choices through more direct mechanisms, rather than indirectly through an individual's willingness to take risks. A study by Aisjah et al., (2021) and Naiwen et al., (2021) shows that risk tolerance does not mediate the relationship between financial literacy and investment decisions which supports the result from this study as well. This proves that investors with high financial literacy do not necessarily require risk tolerance, as they possess good knowledge of investments, allowing them to make investment decisions without overly considering the risks (Nadhifah & Anwar, 2021).

CONCLUSION, SUGGESTION, AND LIMITATION

This study examined the effect of financial literacy, overconfidence, firm image, and self-control towards investment decisions, with risk tolerance as a mediating variable between financial literacy and overconfidence towards investment decisions. Based on the research conducted, it can be concluded that financial literacy, overconfidence, and self-control positively impact investment decisions, while firm image and risk tolerance does not impact investment decisions. The higher an individual's financial knowledge, the more aware they are in making financial decisions. In addition, if an investor is overly confident in their abilities, they could overlook potential risks in their decisions and from the study it can be stated that the more control someone has over their financial decisions, the more

stable they are in managing or optimizing their money. Furthermore, the study found that risk tolerance does not mediate the relationship between financial literacy and overconfidence towards investment decisions. This study provides insights that can help investors reflect on their persona abilities and personality traits when making financial decisions. In addition, it emphasizes the role of policymakers and financial educators in ensuring that investors possess adequate financial knowledge, as well as a sound understanding of the behavioural and psychological aspects that influence investment behaviour.

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