

THE INTERACTION OF EMOTIONAL INTELLIGENCE AND FINANCIAL LITERACY ON INVESTMENT DECISIONS: A MEDIATION STUDY OF RISK TOLERANCE AND RISK PERCEPTION

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Abstract. Investment in financial assets has become a topic of frequent discussion among the younger generation in recent years. This trend aligns with the growth of investors, as reflected in the Single Investor Identification (SID) data. The aim of this study is to examine the impact of financial literacy and emotional intelligence on investment decisions, both directly and indirectly. Additionally, the research seeks to explore the role of risk perception and risk tolerance as mediators in the relationship between financial literacy, emotional intelligence, and investment decisions. This study adopts a quantitative approach and focuses on Generation Z in East Java, with a population of 11,933,122 individuals. The sampling technique employed is purposive sampling, with inclusion criteria such as: individuals residing in East Java, individuals aged between 18 and 24 years, individuals with an SID as an investor identification, and individuals who have previously invested in capital market financial products. The sample size consists of 500 respondents, calculated using Slovin's formula. Data collection was carried out through an online questionnaire distribution. The data analysis method used in this study is Structural Equation Modeling (SEM) with Partial Least Squares (PLS). The result of this study showed that financial literacy significantly influences investment decisions, risk perception, and risk tolerance, with risk perception having a significant impact on investment decisions. However, risk perception and risk tolerance do not mediate the relationship between financial literacy and investment decisions, while emotional intelligence positively and significantly affects investment decisions, risk tolerance, and risk perception, with risk tolerance mediating the relationship between emotional intelligence and investment decisions and risk perception mediating the relationship between emotional intelligence and investment decisions. This research suggested that financial education programs focus not only on improving financial literacy but also on developing emotional intelligence, especially for younger investors in Generation Z. Furthermore, policymakers and financial institutions should consider incorporating emotional intelligence training and risk management strategies into their investor education initiatives. The implications of this research extend to the importance of understanding the psychological aspects of investment behavior, which could enhance decision-making and promote more sustainable investment practices among young investors.

Keywords: Financial Literacy, Emotional Intelligence, Risk Perception, Risk Tolerance, Investment Decision.

INTRODUCTION

Early investment is a crucial step in preparing for future uncertainties. Data from Katadata.co.id. (2021) reveals that Generation Z dominates the capital market in Indonesia, accounting for 1.46 million investors (46.75% of the total SID) by the end of August 2020. Generation Y (millennials) ranks second, with 770 thousand investors (24.55% of the total SID). A report from PT Kustodian Sentral Efek Indonesia (KSEI) (PT Kustodian Sentral Efek Indonesia (KSEI), 2020) also noted a 34.78% increase in the number of capital market investors, rising from 2,484,354 in 2019 to 3,348,396 in 2020. This increase indicates a growing awareness of investment among the younger generation, which requires a deeper understanding of the factors influencing investment decisions.

Financial literacy is a key element in investment decision-making. As explained by Yong et al. (2018), an individual's financial knowledge is a primary determinant of their ability to manage finances and investments. Low levels of financial literacy often pose a significant barrier, leading to irrational investment decisions. Therefore, improving financial literacy not only enhances decision-making ability but also helps investors better understand investment risks. This aligns with prospect theory, which asserts that investment decisions are more influenced by potential gains and losses than by the final outcomes (Kumar & Goyal, 2016). In addition to financial literacy, emotional intelligence also plays a vital role in stabilizing investment decisions.

Emotional intelligence helps individuals regulate their emotions during decision-making. Aristiwati & Hidayatullah (2021) explains that emotion management involves the ability to identify, understand, and reflect on emotions constructively. Stable emotions enable more rational decision-making, as mood significantly affects risk perception and investment decisions (Salehi & Mohammadi, 2017). Furthermore, emotional intelligence enhances social relationships, problem-solving abilities, and fosters responsibility and perseverance in investment (Gumora & Arsenio, 2002). Therefore, emotional intelligence and financial literacy complement each other in the investment decision-making process.

Higher levels of financial literacy and emotional intelligence are correlated with an individual's ability to understand and assess investment risks. Risk perception refers to how individuals define and assess risk, while risk tolerance indicates how much risk an individual is willing to accept. Research by Canikli* & Aren (2019) suggests that risk perception is explained by advanced financial literacy, while Mathews et al. (2019) found a strong relationship between risk perception and investment decisions. Investors with higher financial literacy tend to have a broader perspective on risk, enabling them to make more informed and measured decisions.

Moreover, risk tolerance allows individuals to evaluate market and economic conditions before making decisions. Ye & Kulathunga (2019) identify risk tolerance as a crucial factor in investment decisions. Investors with higher risk tolerance tend to be more cautious and capable of evaluating both potential gains and risks in a proportional manner. In this context, the relationship between financial literacy, emotional intelligence, and investment decisions becomes more complex when risk perception and risk tolerance are considered as mediating factors. However, there is inconsistency in research findings regarding the influence of financial literacy and emotional intelligence on investment decisions. Some studies, such as those by Raheja & Dhiman (2020) and Ezadinea & Fathi (2011), conclude that emotional intelligence does not significantly impact investment decisions. Conversely, Lim et al. (2018) argue that basic financial knowledge has a significant influence. This disparity highlights the need for further investigation to comprehensively understand the factors that affect investment decisions.

This study aims to fill the gap in the literature by considering risk perception and risk tolerance as mediating variables. By adopting this approach, the research seeks to offer new insights into the impact of financial literacy and emotional intelligence on investment decisions. This approach is not only relevant for understanding the investment behavior of younger generations but also for improving the quality of investment decision-making in the future. By exploring the relationships between financial literacy, emotional intelligence, risk perception, and risk tolerance, this study aims to provide practical recommendations for young investors and market stakeholders. In conclusion, financial literacy and emotional intelligence, with mediation from risk perception and risk tolerance, are key factors in improving rational and sustainable investment decisions. This research is expected to make a significant contribution to the development of investment literature and better financial practices.

RESEARCH METHOD

This study employs a quantitative research method with data collection through questionnaires, aimed at examining the influence of financial literacy, emotional intelligence, risk perception, risk tolerance, and investment decisions. The research population consists of Generation Z in East Java, with a total of 11,933,122 individuals (BPS Profinsi Jawa Timur, 2022). The sample size was

determined using the Slovin formula with a margin of error of 5%, resulting in a minimum sample of 400 respondents, which was rounded up to 500. The sampling method used was purposive sampling, selecting individuals who met specific criteria, such as being domiciled in East Java, aged 18-24 years, possessing a Single Investor Identification (SID), and having prior experience with investments in the capital market. Primary data was collected through Likert-scale questionnaires, while secondary data included literature and previous studies (Ghozali, 2018). Data analysis was conducted using SEM-PLS with SmartPLS 3.3.3, involving descriptive statistics to illustrate the variables and inferential statistics for hypothesis testing through Structural Equation Modeling (SEM) (Sekaran & Bougie, 2016).

RESULT AND DISCUSSION

3.1 Respondents' Characteristics

Demographics	Criteria	Total	Percentage
Gender	Male	149	24.51
	Female	459	75.49
	Total	608	100.00
Age	Less than 18 Years Old	17	2.80
	> 18 Yo up to 22 Yo	156	25.66
	> 22 Yo up to 28 Yo	235	38.65
	> 28 Years Old	200	32.89
	Total	608	100.00
Education	Junior High School	62	10.20
	Senior High School	324	53.29
	Bachelor/Diploma	208	34.21
	Postgraduate	14	2.30
	Total	608	100.00
Monthly Salary	Kurang Dari Rp 2.860.000,-	334	54.93
	> Rp 2.860.000,- S/D Rp 7.000.000,-	229	37.66
	> Rp 7.000.000,- S/D Rp 15.000.000,-	34	5.59
	> Rp 15.000.000,- up to Rp 25.000.000,-	7	1.15
	> Rp 25.000.000,- up to Rp 35.000.000,-	3	0.49
	> Rp 35.000.000,- up to Rp 45.000.000,-	0	0.00
	> Rp 45.000.000,-	1	0.16
	Total	608	100.00
Period of Investment	12 Months	411	67.60
	> 12 – 24 Months	95	15.63
	> 24 – 36 Months	53	8.72
	> 36 – 48 Months	17	2.80
	> 48 – 60 Months	10	1.64
	> 60 Months	22	3.62
	Total	608	100.00

The majority of respondents in this study were female, comprising 75.49% of the total sample, indicating a predominant female participation. Age-wise, the largest group was between 22 and 28 years old, accounting for 38.65%, reflecting that most respondents are young adults likely transitioning from education to the workforce. In terms of education, 53.29% of respondents had

completed high school, showing that most are at the secondary education level. Regarding monthly income, 54.93% earned less than IDR 2,860,000, suggesting that the majority come from lower-income groups, likely due to their younger age and unstable employment status. Finally, in terms of investment experience, 67.60% of respondents had less than 12 months of experience, indicating that most are new to investing and still in the early stages of financial stability.

3.2 Evaluation of Measurement Model

Figure 1 presents the preliminary diagram of the outer model calculation generated by SmartPLS version 4.0.9.2, based on tabulations that have not yet undergone reliability and validity testing. The researcher will adopt the testing procedures recommended by Hair et al. (2021) to evaluate this measurement model. Through this approach, the researcher aims to enhance the validity and reliability of the measurement model used in the current study.

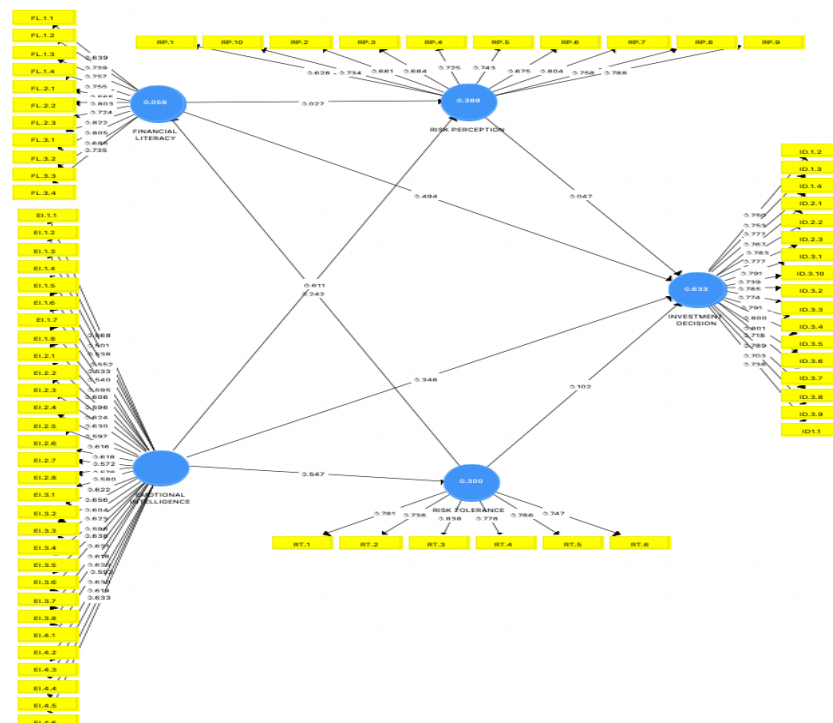


Figure 1. The Result of Outer Loading Evaluation

Sources: Primary Data Processed, 2024

3.3 Reliability Indicator Analysis Results

According to the definition provided earlier, indicator reliability is specifically measured by squaring the standardized outer loading. The recommended threshold value is ≥ 0.708 , as it indicates that more than 50% of the indicator's variance is explained by the construct, ultimately demonstrating acceptable indicator reliability (Hair et al., 2021). The squared value of the outer loading is then referred to as the indicator's communality.

Table 2. Indicator Reliability as the Square of the Outer Loading

Variabel	Indikator Reliability	Nilai Outer Loading	Nilai Kuadrat
Emotional Intelligence	EL1.1	0.568	32.26%
	EL1.2	0.502	25.16%
	EL1.3	0.538	28.94%
	EL1.4	0.553	30.53%
	EL1.5	0.533	28.46%
	EL1.6	0.540	29.13%
	EL1.7	0.594	35.32%
	EL1.8	0.605	36.63%
	EL2.1	0.597	35.59%
	EL2.2	0.624	38.93%
	EL2.3	0.630	39.69%
	EL2.4	0.597	35.59%
	EL2.5	0.616	37.91%
	EL2.6	0.618	38.25%
	EL2.7	0.571	32.63%
	EL2.8	0.576	33.21%
	EL3.1	0.580	33.64%
	EL3.2	0.622	38.67%
	EL3.3	0.656	43.04%
	EL3.4	0.604	36.51%
	EL3.5	0.623	38.81%
	EL3.6	0.595	35.45%
	EL3.7	0.638	40.70%
	EL3.8	0.622	38.65%
	EL4.1	0.617	38.13%
	EL4.2	0.620	38.47%
	EL4.3	0.592	35.05%
	EL4.4	0.629	39.62%
	EL4.5	0.619	38.35%
	EL4.6	0.633	40.10%
Perceived Risk	RP.1	0.628	39.41%
	RP.2	0.661	43.70%
	RP.3	0.684	46.76%
	RP.4	0.725	52.61%
	RP.5	0.743	55.19%
	RP.6	0.675	45.55%
	RP.7	0.804	64.61%
	RP.8	0.758	57.43%
	RP.9	0.788	62.03%
	RP.10	0.734	53.90%
Investment Decision	ID1.1	0.738	54.45%
	ID1.2	0.750	56.27%
	ID1.3	0.753	56.73%
	ID1.4	0.777	60.39%
	ID2.1	0.767	58.85%
	ID2.2	0.783	61.32%
	ID2.3	0.777	60.44%
	ID3.1	0.791	62.62%
	ID3.2	0.785	61.55%
	ID3.3	0.774	59.95%
	ID3.4	0.791	62.58%
	ID3.5	0.800	64.02%
	ID3.6	0.801	64.19%
	ID3.7	0.718	51.57%
	ID3.8	0.789	62.31%
	ID3.9	0.703	49.41%
	ID3.10	0.739	54.60%
Risk Tolerance	RT.1	0.785	61.65%
	RT.2	0.747	55.75%
	RT.3	0.840	70.50%
	RT.4	0.775	59.99%
	RT.5	0.785	61.56%
	RT.6	0.741	54.88%
Financial Literacy	FL1.1	0.639	40.88%
	FL1.2	0.739	54.66%
	FL1.3	0.757	57.37%
	FL1.4	0.755	57.07%
	FL2.1	0.565	31.88%
	FL2.2	0.803	64.42%
	FL2.3	0.724	52.35%
	FL3.1	0.822	67.52%
	FL3.2	0.805	64.82%
	FL3.3	0.685	46.95%
	FL3.4	0.735	54.04%

Referring to the rule of thumb, as shown in Table 2, all indicators for the Emotional Intelligence variable—RP1, RP2, RP3, RP6, FL1.1, FL2.1, FL3.3—are considered unreliable due to their outer loadings being below 0.708, failing to meet the threshold for adequate reliability. The table compares the outer loadings and their squared values, indicating the percentage of variance explained by each construct. Indicators with loadings between 0.4 and 0.7 may still be retained, provided they do not negatively affect internal consistency or convergent validity (Hair et al., 2021). Therefore, not all indicators below the threshold were eliminated; only those such as EL1.1-EL1.8, EL2.4, EL2.5, EL2.7, EL2.8, EL3.1, EL3.6, EL4.1, EL4.3, and EL4.4 were removed as they impacted subsequent analyses. Other indicators with loadings above 0.6 were retained, in line with Chin (Chin et al., 2020), who supports retaining indicators with loadings > 0.6 if other indicators within the same construct exceed 0.708. For comparison, the outer loading of EL1.1 is 0.568, indicating that the construct explains only 32.26% of the variance in this indicator, below the recommended threshold. The final retained indicators and their loadings are presented in Table 4.3. This decision was made to ensure a more accurate interpretation and to uphold the reliability of the measurement model.

Table 3. Outer Loading of Indicators Passing the Reliability Test

VARIABEL	INDIKATOR RELIABILITAS	NILAI OUTERLOADING	VARIABEL	INDIKATOR RELIABILITAS	NILAI OUTERLOADING
EMOTIONAL INTELLIGENCE	EI.2.1	0.713	INVESTMENT DECISION	ID1.1	0.739
	EI.2.2	0.738		ID.1.2	0.751
	EI.2.3	0.783		ID.1.3	0.754
	EI.2.6	0.682		ID.1.4	0.778
	EI.3.2	0.710		ID.2.1	0.768
	EI.3.3	0.792		ID.2.2	0.784
	EI.3.4	0.746		ID.2.3	0.778
	EI.3.5	0.738		ID.3.1	0.792
	EI.3.7	0.594		ID.3.2	0.785
	EI.3.8	0.785		ID.3.3	0.773
	EI.4.2	0.729		ID.3.4	0.790
	EI.4.5	0.655		ID.3.5	0.800
	EI.4.6	0.633		ID.3.6	0.801
				ID.3.7	0.718
FINANCIAL LITERACY	FL.1.1	0.639	RISK PERCEPTION	ID.3.8	0.788
	FL.1.2	0.739		ID.3.9	0.702
	FL.1.3	0.757		ID.3.10	0.738
	FL.1.4	0.755		RP.1	0.628
	FL.2.1	0.565		RP.2	0.660
	FL.2.2	0.803		RP.3	0.684
	FL.2.3	0.724		RP.4	0.724
	FL.3.1	0.822		RP.5	0.743
	FL.3.2	0.805		RP.6	0.673
	FL.3.3	0.685		RP.7	0.804
RISK TOLERANCE	FL.3.4	0.735		RP.8	0.757
	RT.1	0.783		RP.9	0.788
	RT.2	0.745		RP.10	0.737
	RT.3	0.837			
	RT.4	0.774			
	RT.5	0.790			
	RT.6	0.740			

3.4 Results of Convergent Validity Analysis

Table 4. Results of Convergent Validity Analysis Based on AVE Values

	Average Variance Extracted (AVE)
EMOTION INTELLEGENCE	0.515
FINANCIAL LITERACY	0.538
INVESTMENT DECISION	0.589
RISK PERCEPTION	0.521
RISK TOLERANCE	0.607

Convergent validity measures the extent to which the items within a construct are positively correlated. One way to assess this is through the Average Variance Extracted (AVE), where values above 0.5 are considered adequate to indicate strong convergent validity (Hair et al., 2021). As shown in Table 4.4, all variables have AVE values exceeding 0.5, demonstrating strong convergent validity for each construct. This indicates that the items within each construct are positively correlated and effectively measure the intended construct. The Risk Tolerance variable exhibits the highest convergent validity with an AVE of 0.607, followed by Investment Decision (0.589), Financial Literacy (0.538), Risk Perception (0.521), and Emotional

Intelligence (0.515). These results confirm that each construct possesses both reliability and validity, which is crucial for ensuring the accuracy and dependability of further analysis.

3.5 Results of Discriminant Validity Analysis

Table 5. Results of HTMT Analysis

	EMOTION INTELLEGE	FINANCIAL LITERACY	INVESTMENT DECISION	RISK PERCEPTION	RISK TOLERANCE
EMOTION INTELLEGE					
FINANCIAL LITERACY	0.287				
INVESTMENT DECISION	0.487	0.726			
RISK PERCEPTION	0.584	0.321	0.486		
RISK TOLERANCE	0.519	0.266	0.472	0.776	

Based on the test results presented in Table 5, all HTMT values between the variables are below the 0.85 threshold, indicating sufficient discriminant validity between the constructs. In other words, the constructs in the model are conceptually distinct and can be clearly differentiated from one another. It is important to note that this sub-section only presents the HTMT results to assess discriminant validity. This decision is based on the high reliability of HTMT in evaluating discriminant validity, relative to other metrics (Hair et al., 2021). Furthermore, Hair et al. (2021) suggest that although the Fornell-Larcker criterion has been widely used in past research, it does not reliably detect discriminant validity issues. This is further supported by Hair et al. (2021), who explicitly recommend that researchers transition from using Fornell-Larcker to HTMT for assessing discriminant validity.

3.6 Results of Internal Consistency Reliability Analysis

Table 6. Results of Internal Consistency Reliability Analysis

	Cronbach's Alpha	Composite Reliability	
		rho_A	rho_C
EMOTION INTELLEGE	0.920	0.921	0.932
FINANCIAL LITERACY	0.913	0.919	0.927
INVESTMENT DECISION	0.956	0.957	0.961
RISK PERCEPTION	0.898	0.904	0.915
RISK TOLERANCE	0.871	0.877	0.902

Table 6 presents the results of the internal consistency reliability evaluation for five study variables: Emotional Intelligence, Financial Literacy, Investment Decision, Risk Perception, and Risk Tolerance, after removing certain indicators as discussed in the previous section. Three reliability metrics were used: Cronbach's Alpha (CA), Rho_a, and Rho_c. The results indicate that all variables show excellent reliability, with all metrics exceeding the commonly accepted threshold of 0.7. Additionally, the internal consistency reliability meets the recommended rule of thumb ($CA \leq Rho_a \leq Rho_c$) (Hair et al., 2021). The Investment Decision variable stands out with the highest reliability values across all metrics: CA = 0.956, Rho_a = 0.957, and Rho_c = 0.961. In contrast, Risk Tolerance has the lowest reliability values among the five variables: CA = 0.817, Rho_a = 0.877, and Rho_c = 0.902. However, despite these lower values, Risk Tolerance still demonstrates very good reliability. These findings indicate that the measurement instruments are reliable and consistent in assessing the intended constructs. Strong reliability is

crucial for ensuring the accuracy of the research results and lends greater confidence to the findings and interpretations derived from the subsequent data analysis.

3.7 Structural Model Evaluation

3.7.1 Results of Collinearity Analysis

Table 7. Collinearity Structural Model

	VIF
Emotional Intelligence - Investment Decision	1.460
Emotional Intelligence - Risk Perception	1.075
Emotional Intelligence - Risk Tolerance	1.075
Financial Literacy - Investment Decision	1.117
Financial Literacy - Risk Perception	1.075
Financial Literacy - Risk Tolerance	1.075
Risk Perception - Investment Decision	2.103
Risk Tolerance - Investment Decision	1.899

In Table 7, the VIF values for each relationship between constructs in the inner model range from 1.075 to 2.103, well below the commonly accepted threshold of 3. Therefore, it can be concluded that the structural model does not face collinearity issues. This result further strengthens confidence in the reliability of the coefficient estimates in the structural model, enhancing the overall integrity of the analysis.

3.7.2 Result of R² Analysis

Table 8. Result of R² Test

	R Square	R Square Adjusted
INVESTMENT DECISION	0.592	0.589
RISK PERCEPTION	0.308	0.306
RISK TOLERANCE	0.234	0.231

Based on Table 8, the adjusted R-squared values indicate the proportion of variance explained by the independent variables for each dependent variable. For Investment Decision, the adjusted R-squared value is 0.589 (high effect), meaning that 58.9% of the variance in Investment Decision is explained by Risk Perception, Risk Tolerance, Financial Literacy, and Emotional Intelligence, while the remaining 42.1% is influenced by factors outside the scope of this study. For Risk Perception, the adjusted R-squared value is 0.306 (low effect), indicating that 30.6% of the variance in Risk Perception is explained by Financial Literacy and Emotional Intelligence, with the remaining 69.4% influenced by other variables not included in the study. Similarly, the adjusted R-squared value for Risk Tolerance is 0.234 (low effect), meaning that 23.4% of the variance in Risk Tolerance is explained by Financial Literacy and Emotional Intelligence, while the remaining 76.6% is influenced by variables outside the research model.

3.8 Hypothesis Testing

Hypothesis testing in this study was conducted using SmartPLS version 4.0.9.2 with the bootstrapping method to assess the significance of direct effects, indirect effects, and total effects. Table 9 presents the results of the hypothesis testing using the bootstrapping method selected by the researcher.

Table 9. Hypotheses Testing Result

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
FINANCIAL LITERACY -> INVESTMENT DECISION (H1)	0.570	0.570	0.028	20.046	0.000
FINANCIAL LITERACY -> RISK PERCEPTION (H2)	0.168	0.172	0.049	3.451	0.001
RISK PERCEPTION -> INVESTMENT DECISION (H3)	0.122	0.123	0.045	2.721	0.007
FINANCIAL LITERACY -> RISK PERCEPTION -> INVESTMENT DECISION (H4)	0.021	0.022	0.011	1.938	0.053
FINANCIAL LITERACY -> RISK TOLERANCE (H5)	0.124	0.125	0.046	2.690	0.007
RISK TOLERANCE -> INVESTMENT DECISION (H6)	0.141	0.140	0.043	3.252	0.001
FINANCIAL LITERACY -> RISK TOLERANCE -> INVESTMENT DECISION (H7)	0.018	0.018	0.009	1.910	0.057
EMOTION INTELLEGEENCE -> INVESTMENT DECISION (H8)	0.175	0.173	0.040	4.355	0.000
EMOTION INTELLEGEENCE -> RISK TOLERANCE (9)	0.436	0.438	0.045	9.705	0.000
EMOTION INTELLEGEENCE -> RISK TOLERANCE -> INVESTMENT DECISION (H10)	0.061	0.062	0.020	3.020	0.003
EMOTION INTELLEGEENCE -> RISK PERCEPTION (H11)	0.487	0.488	0.046	10.557	0.000
EMOTION INTELLEGEENCE -> RISK PERCEPTION -> INVESTMENT DECISION (H12)	0.060	0.060	0.023	2.592	0.010

1. **H1 Accepted:** The relationship between financial literacy and investment decision is significant and positive, with an original sample value (O) of 0.570. The p-value of 0.000 indicates statistical significance (p-value < 0.05), meaning that higher financial literacy significantly influences investment decisions.

2. **H2 Accepted:** There is a significant positive relationship between financial literacy and risk perception. The original sample value (O) of 0.168 shows that better financial literacy increases the impact on how individuals perceive risk. The p-value of 0.001 confirms the statistical significance of this relationship.
3. **H3 Accepted:** The relationship between risk perception and investment decision is significant and positive. The original sample value (O) of 0.122 indicates that risk perception influences investment decisions. With a p-value of 0.007, this relationship is statistically significant, suggesting that risk perception impacts the decisions made.
4. **H4 Rejected:** The indirect relationship between financial literacy, risk perception, and investment decision shows a very small value with an original sample (O) of 0.021. The p-value of 0.053, slightly above the 0.05 threshold, indicates that this indirect effect is not statistically significant, meaning it does not contribute significantly to investment decisions.
5. **H5 Accepted:** Financial literacy has a positive effect on risk tolerance. The original sample value (O) of 0.124 indicates a significant positive relationship, and the p-value of 0.007 confirms the statistical significance. This means that higher financial literacy leads to greater risk tolerance.
6. **H6 Accepted:** Risk tolerance positively and significantly affects investment decision. The original sample value (O) of 0.141 indicates that individuals with higher risk tolerance tend to make larger investment decisions. The p-value of 0.001 supports the statistical significance of this relationship.
7. **H7 Rejected:** The indirect effect between financial literacy, risk tolerance, and investment decision is not significant. The original sample value (O) of 0.018 and p-value of 0.057, which is slightly above 0.05, indicate that this indirect relationship does not contribute significantly to investment decisions.
8. **H8 Accepted:** Emotional intelligence has a positive and significant effect on investment decision. The original sample value (O) of 0.175 indicates that higher emotional intelligence positively influences investment decisions. The p-value of 0.000 confirms that this relationship is statistically significant.
9. **H9 Accepted:** There is a highly significant positive relationship between emotional intelligence and risk tolerance. The original sample value (O) of 0.436 shows that higher emotional intelligence is associated with greater risk tolerance. The p-value of 0.000 indicates that this relationship is statistically significant.
10. **H10 Accepted:** Emotional intelligence has an indirect effect on investment decision through risk tolerance. The original sample value (O) of 0.061 shows a positive effect, and the p-value of 0.003 indicates that this indirect relationship is statistically significant.
11. **H11 Accepted:** Emotional intelligence has a very significant relationship with risk perception. The original sample value (O) of 0.487 indicates a strong positive relationship, where higher emotional intelligence is associated with better-managed or lower risk perception. The p-value of 0.000 confirms the statistical significance of this relationship.
12. **H12 Accepted:** Emotional intelligence affects investment decisions indirectly through risk perception. The original sample value (O) of 0.060 shows a positive effect, and the p-value of 0.010 indicates that this indirect effect is statistically significant, although smaller than the direct effect.

3.9 Discussion

3.9.1 Financial Literacy towards Investment Decision

The results of hypothesis test H1 indicate that financial literacy has a positive and significant effect on investment decisions, with a path coefficient of 0.570 and a p-value of 0.000. This suggests that the higher an individual's financial literacy, the more likely they are to make informed and rational investment decisions. These findings align with the Behavioral Finance theory, which posits that investment decisions are often influenced by a deep understanding of risk, potential returns, and financial market mechanisms. In other words, individuals with good financial literacy are better equipped to evaluate various

investment products and associated risks, enabling them to make more rational decisions, avoid investment mistakes, and optimize long-term returns.

Theoretically, financial literacy encompasses an understanding of personal financial management, such as saving, investing, and managing debt and risk. Mandell (Mandell, 2008) in his research found that individuals with higher financial literacy tend to be more future-oriented in their financial decision-making, including selecting investment instruments that align with their long-term goals. This also aligns with the Life-Cycle Hypothesis (LCH) proposed by Modigliani & Brumberg (1954), which asserts that investment decisions are influenced by an individual's financial planning throughout their life. Individuals with good financial literacy are more capable of planning their fund allocations for investments, helping them achieve financial well-being in the future. Previous research also supports these findings. Lusardi & Mitchell (2014) found that individuals with better financial knowledge are more likely to invest and better able to assess the risks associated with these investments. They showed that financial literacy helps individuals understand and manage more complex investment instruments, such as stocks, bonds, and mutual funds, thus enabling them to make more informed investment decisions. Additionally, H. Chen & Volpe (1998) emphasized that higher financial literacy enhances an individual's ability to recognize potential investment risks and mitigate losses.

In the context of investment decisions, financial literacy facilitates individuals in making decisions based on rational analysis rather than emotional reactions or short-term speculation. Huston (2010) stated that financial literacy creates risk awareness, enabling individuals to understand potential losses and prepare better mitigation strategies. This is also consistent with the Risk-return Trade-off theory, which emphasizes the importance of understanding the relationship between risk and return. The better an individual's understanding of this relationship, the greater their ability to make decisions that align with their risk profile and investment objectives. Thus, the results of hypothesis H1 provide a deeper understanding that financial literacy is not only related to technical knowledge of financial instruments but also to an individual's ability to plan and evaluate financial decisions as a whole. Individuals with good financial literacy are better equipped to make smart, informed investment decisions, which in turn can enhance their financial well-being.

3.9.2 Financial Literacy towards Risk Perception

The results of hypothesis test H2 indicate that financial literacy has a positive and significant effect on risk perception, with a path coefficient of 0.168 and a p-value of 0.001. These findings suggest that individuals with higher financial literacy tend to have a more accurate and well-informed perception of the risks associated with investment decisions. In this context, financial literacy helps individuals better understand the potential risks in financial markets and recognize the risks that may arise from the investments they choose. Theoretically, risk perception refers to how individuals assess and interpret risk in the context of financial decision-making. Dowling & Lucey (2008) argue that individuals with strong financial literacy are better able to evaluate and understand risks more objectively, which helps them avoid common risk perception errors, such as the tendency to underestimate or overestimate risks. In other words, financial literacy provides a solid foundation for developing a more realistic and balanced perception of risk.

Previous studies, such as those by Lusardi & Mitchell (2014), have shown that individuals with higher financial literacy are more likely to have a more accurate risk perception, which aids them in making more rational and informed investment decisions. The study found that understanding basic financial concepts like interest rates, inflation, and portfolio diversification enables individuals to better manage their expectations regarding risk, thus avoiding high-risk investment decisions. Overall, the results of hypothesis H2 support the importance of financial literacy in shaping a more accurate and rational risk perception. By enhancing individuals' understanding of financial concepts and investment instruments, they can better assess the various risks involved and reduce the likelihood of making hasty decisions or those influenced by cognitive biases.

3.9.3 Risk Perception towards Investment Decision

The results of hypothesis test H3 show that risk perception has a positive and significant effect on investment decisions, with a path coefficient of 0.122 and a p-value of 0.007. This finding suggests that individuals with a well-informed and realistic risk perception are more likely to make prudent and informed investment decisions. When individuals have a better understanding of the level of risk associated with an investment, they are more capable of selecting investment products that align with their risk profile and financial goals. Theoretically, risk perception is a crucial component in investment decision-making. Fama (1970), in his Efficient Market Hypothesis (EMH), asserts that financial markets are places where information about risk can be understood and evaluated by investors. In other words, individuals with an accurate risk perception are better equipped to assess available market information wisely and use that information to make optimal investment decisions.

Previous studies also support this finding. Schubert et al. (1999) in their study found that higher risk perception is associated with a tendency to choose more conservative investment instruments and avoid higher risks. They showed that individuals with a good risk perception are more likely to adopt safer investment strategies, reflecting more rational investment decisions. This finding aligns with Prospect Theory, developed by Kahneman & Tversky (2018), which posits that individuals tend to avoid risk in uncertain situations, particularly when they perceive that losses are more likely than gains. Based on these findings, it can be concluded that risk perception plays an important role in shaping investment decisions. Individuals with accurate and realistic risk perceptions are more likely to make decisions that align with their financial goals, thereby contributing to their long-term investment success.

3.9.4 Risk Perception, Financial Literacy, and Investment Decision

The results of hypothesis test H4 indicate that risk perception mediates the relationship between financial literacy and investment decisions, with a path coefficient of 0.021 and a p-value of 0.053, which is close to the significance threshold. Although this p-value is slightly above the standard significance level (0.05), the findings suggest that risk perception can act as a mediating variable in influencing how financial literacy impacts investment decisions. In other words, an increase in financial literacy indirectly affects investment decisions through changes in the individual's risk perception.

Theoretically, this relationship can be understood in the context of the Risk-Return Trade-Off theory, which posits that individuals with a better understanding of finance are more capable of assessing and managing the risks involved in investments. Merton (1972), in his portfolio theory, argued that individuals with high financial literacy develop a more realistic risk perception, which in turn influences their investment decisions, including asset selection and optimal investment allocation. Research by Lusardi & Mitchell (2014) also supports this finding, showing that individuals with higher financial literacy are not only more likely to invest but also have a better understanding of risks and how to manage them, ultimately strengthening their investment decisions. In other words, higher financial literacy enhances an individual's ability to understand and assess risk, which subsequently influences more informed investment decisions.

3.9.5 Financial Literacy towards Risk Tolerance

The results of hypothesis test H5 show that financial literacy has a positive and significant effect on risk tolerance, with a path coefficient of 0.124 and a p-value of 0.007. This finding indicates that individuals with higher financial literacy tend to have greater risk tolerance. A good understanding of investment instruments, the risks involved, and potential returns enables individuals to feel more prepared and confident in facing investment risks, making them more willing to take on higher risks in pursuit of greater rewards.

Theoretically, the relationship between financial literacy and risk tolerance can be explained by Modern Portfolio Theory (MPT), proposed by Markowitz (1952). MPT suggests that individuals who understand diversification and risk management are more

likely to have higher risk tolerance because they can effectively manage and reduce risks within their portfolios. Financial literacy allows individuals to recognize that greater risks can lead to higher potential returns, and with the right strategy, these risks can be minimized or managed more effectively. Previous research, such as that by Lusardi & Mitchell (2014), also supports this finding, showing that individuals with higher financial literacy are more likely to have greater risk tolerance. They are better able to evaluate different investment instruments and feel more comfortable taking on higher risks if these align with their financial goals.

3.9.6 Risk Tolerance towards Investment Decision

The results of hypothesis test H6 indicate that risk tolerance has a positive and significant effect on investment decisions, with a path coefficient of 0.141 and a p-value of 0.001. This finding suggests that individuals with higher risk tolerance are more likely to invest in riskier instruments, such as stocks or other speculative investments, with the expectation of higher returns. Theoretically, this aligns with the Risk-Return Trade-Off theory, which posits that individuals with higher risk tolerance are more prepared to face market volatility and make higher-risk investment decisions. Kahneman & Tversky (2018) Prospect Theory also explains that individuals with greater risk tolerance are more attracted to opportunities involving higher risks, anticipating larger returns. Previous research supports this finding, such as the work by Grable (2000), which identified risk tolerance as a key factor in investment decision-making. Individuals with higher risk tolerance are more likely to choose riskier and potentially more rewarding investment instruments.

3.9.7 Risk Tolerance, Financial Literacy, and Investment Decision

The results of hypothesis test H7 show that risk tolerance mediates the relationship between financial literacy and investment decisions, with (Grable, 2000) a path coefficient of 0.018 and a p-value of 0.057. Although the p-value is slightly above the significance threshold (0.05), this finding still suggests that financial literacy influences investment decisions indirectly by enhancing individuals' risk tolerance. In other words, financial literacy not only has a direct impact on investment decisions but also increases risk tolerance, which in turn affects how individuals make investment choices.

Theoretically, this finding reinforces the understanding that risk tolerance is a crucial factor in linking financial literacy and investment decisions. Markowitz (1952), in his Modern Portfolio Theory, argued that individuals who better understand investment risks are more likely to have higher risk tolerance, which enables them to make bolder investment decisions aligned with their long-term financial goals. Financial literacy equips them with the necessary understanding to assess and manage risks, ultimately increasing the likelihood of making larger, more profitable investment decisions. Previous studies, such as Grable (2000), have shown that individuals with higher financial literacy tend to have greater risk tolerance, enabling them to take more confident investment decisions. Additionally, Lusardi & Mitchell (2014) emphasized that financial literacy improves individuals' understanding of investment risks, and when individuals have higher risk tolerance, they are more likely to make bold investment decisions.

3.9.8 Emotional Intelligence towards Investment Decision

The results of hypothesis test H8 show that emotional intelligence has a positive and significant effect on investment decisions, with a path coefficient of 0.175 and a p-value of 0.000. This finding indicates that individuals with higher emotional intelligence are more likely to make better investment decisions. Emotional intelligence enables individuals to manage their emotions more effectively when facing market fluctuations, which can influence their investment-related decision-making. Theoretically, emotional intelligence plays a crucial role in investment decision-making, especially when dealing with market uncertainty and volatility. Goleman (1995) argues that individuals with high emotional intelligence have the ability to manage their emotions effectively, which can reduce the

impact of impulsive or emotionally-driven decisions. Mayer et al. (2009) also highlight that the ability to recognize and manage one's own emotions, as well as understand others' emotions, is essential for rational and prudent decision-making, including in the context of investments.

Previous research by Fazal Hadi (2017) found that emotional intelligence significantly influences investment decisions, particularly in helping investors remain calm during market volatility and avoid decisions driven by fear or greed. Emotional intelligence enables investors to manage the emotional pressures that often arise when facing uncertainty in investments, allowing them to make more rational and objective decisions.

3.9.9 Emotional Intelligence towards Risk Tolerance

The results of hypothesis test H9 indicate that emotional intelligence has a positive and significant effect on risk tolerance, with a path coefficient of 0.436 and a p-value of 0.000. This finding suggests that individuals with higher emotional intelligence are more likely to have greater risk tolerance. Emotional intelligence enables individuals to manage anxiety or fear related to risk and to remain calm when facing potential losses, ultimately enhancing their willingness to accept higher risks in investments.

Theoretically, this relationship can be explained through emotion regulation, which is a key component of emotional intelligence. Goleman (1995) argues that the ability to regulate and delay emotional gratification helps individuals avoid impulsive decisions that could be detrimental in an investment context. Individuals with high emotional intelligence are better able to control the fear and anxiety that often arise when faced with investment risks, which encourages them to make bolder decisions. Previous research by Song et al. (2023) also supports this finding, showing that emotional intelligence influences risk tolerance. Individuals with higher emotional intelligence are better able to manage emotional tension when making risky investment decisions, enabling them to accept higher levels of risk in their decision-making.

3.9.10 Risk Tolerance, Emotional Intelligence, and Investment Decision

The results of hypothesis test H10 indicate that risk tolerance mediates the relationship between emotional intelligence and investment decisions, with a path coefficient of 0.061 and a p-value of 0.003. This finding suggests that emotional intelligence influences investment decisions through increased risk tolerance. Individuals with higher emotional intelligence are better able to manage their emotions when faced with risk, which, in turn, allows them to make bolder and riskier investment decisions.

Theoretically, this relationship can be explained by referring to Behavioral Finance theory, which highlights the role of psychological factors, including emotional intelligence, in influencing investment decision-making. Shefrin (2000) in this theory argues that emotions can affect risk perception, and with good emotional intelligence, individuals can better manage those emotions, leading to higher risk tolerance and more optimal investment decisions. Research by Barberis & Thaler (2005) supports this finding, showing that individuals who are able to control their emotions tend to have higher risk tolerance, which ultimately influences their investment decisions. Emotional intelligence enables individuals to avoid decisions driven by anxiety or fear, which often lead to suboptimal choices.

3.9.11 Emotional Intelligence towards Risk Perception

The results of hypothesis test H11 indicate that emotional intelligence has a positive and significant effect on risk perception, with a path coefficient of 0.487 and a p-value of 0.000. This finding suggests that individuals with higher emotional intelligence tend to have a better and more accurate risk perception. Emotional intelligence enables individuals to manage their emotions, such as fear or anxiety, which can influence the way they assess risk in investment decisions.

Theoretically, this finding is consistent with Prospect Theory developed by Kahneman & Tversky (2018), which posits that feelings and emotions affect how individuals evaluate

risks and potential losses. Individuals with high emotional intelligence are better able to manage their emotions when facing uncertainty, allowing them to assess risks more objectively and rationally. Research by Fazal Hadi (2017) also supports this finding, showing that emotional intelligence influences how investors perceive and respond to risk. Individuals with higher emotional intelligence are more likely to make wiser judgments regarding risk and to make more informed investment decisions.

3.9.12 Risk Perception, Emotional Intelligence, and Investment Decision

The results of hypothesis test H12 indicate that risk perception mediates the relationship between emotional intelligence and investment decisions, with a path coefficient of 0.060 and a p-value of 0.010. This finding suggests that emotional intelligence affects investment decisions through changes in an individual's risk perception. Individuals with higher emotional intelligence are more likely to have a more accurate perception of risk, which, in turn, influences their investment decisions.

Theoretically, this finding can be explained by Affective Decision Theory, which asserts that emotions play a crucial role in decision-making, especially in situations involving uncertainty. Loewenstein et al. (2001) argue that emotions can influence risk assessment and investment decisions. Individuals with higher emotional intelligence are better able to manage their emotions, which allows them to make more rational decisions based on a more objective perception of risk. Research by C. Chen et al. (2022) also found that risk perception mediates the impact of emotional intelligence on investment decision-making. Individuals with high emotional intelligence are more capable of understanding and accurately assessing risk, which enables them to make better and more profitable investment decisions.

CONCLUSION

The study reveals several key insights regarding financial literacy, emotional intelligence, risk tolerance, and investment decisions. Financial literacy significantly influences both investment decisions and risk perception, with higher literacy leading to more rational investment choices and a more accurate understanding of associated risks. Risk perception mediates the relationship between financial literacy and investment decisions, while financial literacy also impacts an individual's risk tolerance, enabling them to make bolder investment decisions. Emotional intelligence plays a crucial role in investment decisions, as individuals with higher emotional intelligence can manage their emotions better in uncertain market conditions, leading to improved decision-making. Furthermore, emotional intelligence positively affects both risk tolerance and risk perception, suggesting that individuals with higher emotional intelligence are more confident in assessing and accepting risk, ultimately leading to more informed investment choices. Risk tolerance also serves as a mediator between emotional intelligence and investment decisions.

Given these findings, it is essential to continue enhancing financial literacy education across diverse societal groups. This includes both basic and advanced financial knowledge, such as personal finance management and risk mitigation strategies. Additionally, emotional intelligence development should be emphasized, particularly for investors, through training programs focused on emotional regulation and decision-making under stress. Further research on risk tolerance is also recommended, especially in exploring factors like demographics and personal experiences that shape individual risk profiles. An interdisciplinary approach that combines finance, psychology, and behavioral science could provide a more comprehensive understanding of how emotional and rational factors influence investment decisions, thereby helping to develop more effective, tailored investment strategies.

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