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THE INFLUENCE OF FINANCIAL LITERACY ON FINANCIAL BEHAVIOR WITH FINANCIAL RISK TOLERANCE AS A MEDIATOR AND EMOTIONAL INTELLIGENCE AS A MODERATOR IN GEN Z OF CENTRAL JAVA PROVINCE

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Abstract

This study aims to examine the effect of financial literacy on financial behaviour among Generation Z in Central Java, Indonesia, by investigating the mediating role of financial risk tolerance and the moderating role of emotional intelligence. This study employed a quantitative approach using a survey method. Data were collected through a structured questionnaire distributed to Generation Z respondents and analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS software. The results indicate that financial literacy positively and significantly influences financial behaviour ($\beta = 0.487$, $p < 0.001$) and financial risk tolerance ($\beta = 0.587$, $p < 0.001$). Financial risk tolerance also positively affects financial behaviour ($\beta = 0.342$, $p < 0.001$). Emotional intelligence positively influences financial risk tolerance ($\beta = 0.315$, $p = 0.001$), but it does not directly influence financial behaviour ($\beta = -0.024$, $p = 0.715$). Furthermore, emotional intelligence strengthens the influence of financial literacy on both financial behaviour and financial risk tolerance. Financial risk tolerance also mediates the relationships between financial literacy and financial behaviour, as well as between emotional intelligence and financial behaviour. This study contributes to the literature by proposing a moderated mediation model that integrates cognitive, emotional, and risk management dimensions to explain sustainable financial behaviour among Generation Z in the digital economy.

Keywords: *financial literacy*, *financial behaviour*, *financial risk tolerance*, *emotional intelligence*, *Generation Z*, PLS-SEM.

INTRODUCTION

Financial behavior is a crucial indicator of individual well-being because it relates to the ability to manage income, expenses, savings, investments, and debt rationally and sustainably. Good financial behavior can foster financial stability, while poor financial behavior can potentially lead to various problems, such as consumer behavior, low savings rates, high debt usage, and poor long-term financial planning. From a behavioral finance perspective, financial behavior is influenced not only by financial knowledge but also by an individual's psychological and emotional factors in making financial decisions (Song et al., 2023). This phenomenon is even more complex for Generation Z, the group born between 1997 and 2012 who grew up in the digital era with widespread access to digital financial services, such as e-wallets, financial technology (fintech), buy now pay later (BNPL), and online investments. This ease of access provides opportunities for increased financial inclusion, but also has the potential to encourage consumer behavior and impulsive financial decision-making due to the influence of social media, the fear of missing out (FOMO), and a digital lifestyle. Data from the Financial Services Authority (OJK) in 2022 shows that Indonesia's financial inclusion rate reached 85.10%, while its financial literacy rate was only 49.68%. This situation indicates a gap between the high use of financial services and low financial management skills, especially among Generation Z. Previous research on the relationship between financial literacy and financial behavior has yielded inconsistent results. Research by Lusardi & Mitchell, 2014; Xiao & Porto, 2017 found that financial literacy had a positive effect on financial behavior. However, research by Johan et al., 2021; Khasanah et al., 2022; Mandell & Klein, 2009indicates that increased financial literacy does not necessarily translate into changes in financial behavior. In fact, research by Beal & Delpachitra, 2003 found a negative relationship in certain contexts. These inconsistent results indicate a research gap, indicating the existence of other factors influencing the relationship between financial literacy and financial behavior. One factor suspected to play a role is financial risk tolerance, which is an individual's level of preparedness to face financial risks. Individuals with good financial literacy tend to be more rational in understanding and managing financial risks (Grable et al., 2021). Furthermore, emotional intelligence is also an important factor because it relates to an individual's ability to recognize, manage, and control emotions when making financial decisions. Research by Aren & Zengin, 2016 shows that emotional intelligence has a positive effect on financial behavior. However, research findings regarding its role as a moderating variable are inconsistent. Song et al. (2023) found that emotional intelligence strengthened the relationship between financial literacy and financial behavior, while Ningtyas & Putra, 2024 found that emotional intelligence did not moderate this relationship. Based on empirical evidence and inconsistencies in previous research, there remains a research gap in integrating financial literacy, financial risk tolerance, and emotional intelligence into a comprehensive research model, particularly for Generation Z in Central Java. Therefore, this study aims to analyze the influence of financial literacy on financial behavior with financial risk tolerance as a mediating variable and emotional intelligence as a moderating variable on Generation Z in Central Java Province.

LITERATURE REVIEW

Financial Literacy

Financial literacy is an individual's ability to understand, manage, and use financial knowledge to make effective financial decisions. Individuals with a good level of financial literacy tend to be better able to manage income, create budgets, control expenses, and prepare for future financial needs. Research by Lusardi & Mitchell, 2014 shows that financial literacy plays a crucial role in improving the quality of financial decision-making and individual financial well-being.

Financial Behavior

Financial behavior is an individual's behavior in managing finances, including planning, budgeting, saving, investing, debt management, and financial protection. According to John Dew and Jing Jian Xiao (2011), financial behavior can be measured through four main dimensions: cash management, saving and investment, credit management, and insurance. Good financial behavior contributes to an individual's financial stability and well-being.

Financial Risk Tolerance

Financial risk tolerance is an individual's level of readiness to accept risks when making financial and investment decisions. Individuals with a high risk tolerance tend to be better prepared to face financial uncertainty and are more rational in making investment choices. Research by Grable et al., 2021 showed that financial literacy is positively related to financial risk tolerance, so individuals with a good financial understanding tend to be more able to manage risk effectively.

Emotional Intelligence

Emotional intelligence is an individual's ability to recognize, understand, control, and utilize emotions in various situations, including financial decision-making. Individuals with high emotional intelligence tend to be better able to control impulsive behavior and social pressure, thus enabling them to make more rational financial decisions. Research by Aren & Zengin, 2016; Song et al., 2023 shows that emotional intelligence plays a significant role in improving financial behavior.

The Relationship between Financial Literacy and Financial Behavior

Theoretically, financial literacy has a positive relationship with financial behavior. Individuals who understand financial concepts well are better able to manage their finances effectively. Research by Lusardi & Mitchell, 2014; Xiao & Porto, 2017 found that financial literacy has a positive effect on financial behavior. However, several studies have shown conflicting results. Johan et al., 2021; Khasanah et al., 2022; Mandell & Klein, 2009 found that increased financial literacy is not always accompanied by changes in financial behavior.

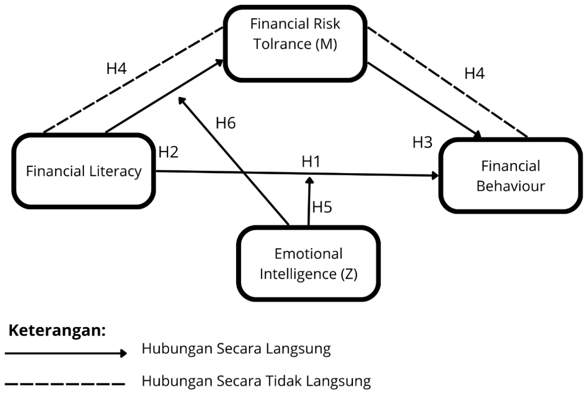
The Role of Financial Risk Tolerance and Emotional Intelligence

Financial risk tolerance and emotional intelligence are thought to explain the inconsistency in the relationship between financial literacy and financial behavior. Song et al., 2023 found that financial risk tolerance acts as a mediating mechanism for the influence of financial literacy on financial behavior, while emotional intelligence strengthens this relationship. However, Ningtyas & Putra, 2024 found that intelligence was unable to moderate the relationship between financial literacy and financial behavior. These discrepancies in research findings indicate that the role of psychological factors requires further examination, particularly among Generation Z in Central Java.

METHOD

This study used a quantitative approach with an exploratory research design to examine the relationship between financial literacy, financial risk tolerance, emotional intelligence, and financial behavior among Generation Z in Central Java, Indonesia. Data were collected through an online questionnaire distributed using a purposive sampling technique. Respondents consisted of 330 Generation Z individuals aged 17–29 years who had experience using digital financial services. The research variables consisted of financial literacy as the independent variable, financial behavior as the dependent variable, financial risk tolerance as the mediating variable, and emotional intelligence as the moderating variable. All constructs were measured using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Data analysis was conducted using Structural Equation Modeling Partial Least Squares (SEM-PLS) with SmartPLS software. The analysis involved two stages: (1) evaluation of the measurement model (outer model) through convergent validity, discriminant validity, Cronbach's alpha, composite reliability, and average variance extracted (AVE); and (2) evaluation of the structural model (internal model) through the coefficient of determination (R^2), effect size (f^2), predictive relevance (Q^2), and hypothesis testing using the bootstrapping procedure. The significance criteria used were t statistics > 1.96 and p value < 0.05 (Hair et al., 2021).



Conceptual Framework

Based on the conceptual framework and literature review explained previously, the hypotheses in this study are formulated as follows:
H1: Financial literacy has a positive and significant effect on financial behavior.
H2: Financial literacy has a positive and significant effect on financial risk tolerance.
H3: Financial risk tolerance has a positive and significant effect on financial behavior.
H4: Financial risk tolerance mediates the effect of financial literacy on financial behavior.
H5: Emotional intelligence moderates the effect of financial literacy on financial behavior.
H6: Emotional intelligence moderates the effect of financial risk tolerance on financial behavior.

RESULTS AND DISCUSSION

This study aims to examine the effect of financial literacy on financial behaviour, with financial risk tolerance as a mediating variable and emotional intelligence as a moderating variable. A quantitative research design was employed using a survey method, in which data were collected through a structured questionnaire distributed to respondents. Data analysis was conducted using Structural Equation Modeling (SEM) based on Partial Least Squares (PLS) with the assistance of SmartPLS 4 software. The PLS-SEM approach was selected due to its capability to analyze complex relationships among latent variables, including the simultaneous assessment of mediation and moderation effects. The research model comprises four main constructs, namely financial literacy (FL), financial behaviour (FB), financial risk tolerance (FRT), and emotional intelligence (EI). A total of 330 respondents participated in this study and were included in the empirical analysis.

Descriptive Analysis of Research Variables

Descriptive analysis was conducted to provide an overview of respondents' perceptions of the research variables. The variables examined in this study include financial literacy (FL), financial behaviour (FB), financial risk tolerance (FRT), and emotional intelligence (EI). Overall, the results indicate that respondents demonstrate relatively high levels across all constructs. This suggests that the participants possess adequate financial knowledge, exhibit sound financial behaviour, show a reasonable level of risk tolerance, and have well-developed emotional intelligence. These findings provide an initial indication that the respondents are financially aware and capable of making informed financial decisions.

CONCLUSION (TNR, 12 BOLD)

Measurement Model Evaluation

Convergent Validity

Convergent validity was assessed using outer loading and Average Variance Extracted (AVE). According to Hair et al. (2022), indicators are considered valid when loading factors exceed 0.70 and AVE values exceed 0.50. The PLS Algorithm results indicate that all indicators have loading values above 0.70, confirming indicator validity and adequate representation of their respective constructs. In addition, all constructs exhibit AVE values above the threshold of 0.50, thereby confirming convergent validity.

Discriminant Validity

Discriminant validity was assessed using the Heterotrait-Monotrait Ratio (HTMT). Based on Henseler et al. (2015), HTMT values should be below 0.90 to confirm discriminant validity. The results show that all HTMT values are below 0.90, indicating that each construct is empirically distinct and demonstrates adequate discriminant validity.

Reliability Analysis

Construct reliability was evaluated using Cronbach's Alpha and Composite Reliability. A construct is considered reliable when both values exceed 0.70. The results confirm that all constructs meet this criterion, indicating strong internal consistency across financial literacy, financial behaviour, financial risk tolerance, and emotional intelligence.

Structural Model Evaluation

Coefficient of Determination (R^2)

The explanatory power of the model was assessed using the coefficient of determination (R^2). The results are presented in Table X.

The R^2 value for financial behaviour is 0.432, indicating that financial literacy, financial risk tolerance, emotional intelligence, and interaction effects explain 43.2% of the variance in financial behaviour. Meanwhile, the R^2 value for financial risk tolerance is 0.444, indicating that financial literacy and emotional intelligence, including interaction effects, explain 44.4% of its variance. According to Hair et al. (2022), these values indicate a moderate level of explanatory power.

Predictive Relevance (Q^2)

The Q^2 predictive relevance test shows that all endogenous constructs have Q^2 values greater than zero, indicating that the model possesses acceptable predictive relevance and out-of-sample predictive capability.

Hypothesis Testing Results

Hypothesis testing was conducted using the bootstrapping procedure with a significance level of 5% (T-statistic > 1.96; P-value < 0.05).

Tabel

Relationship between variables	Koefisien	T-Statistik	P-Value	Decision
FL → FB	0,487	5,351	0,000	accepted
FL → FRT	0,587	6,219	0,000	accepted
FRT → FB	0,342	4,623	0,000	accepted
EI → FRT	0,315	3,350	0,001	accepted
EI → FB	-0,024	0,365	0,715	rejected

Direct Effects

The results indicate that financial literacy has a positive and significant effect on financial behaviour ($\beta = 0.487$, $t = 5.351$, $p < 0.001$), supporting H1. Financial literacy also significantly affects financial risk tolerance ($\beta = 0.587$, $t = 6.219$, $p < 0.001$), supporting H2. Furthermore, financial risk tolerance has a positive and significant effect on financial behaviour ($\beta = 0.342$, $t = 4.623$, $p < 0.001$), supporting H3.

Emotional intelligence has a positive and significant effect on financial risk tolerance ($\beta = 0.315$, $t = 3.350$, $p = 0.001$), supporting its direct relationship. However, its direct effect on financial behaviour is not significant ($\beta = -0.024$, $t = 0.365$, $p = 0.715$), leading to rejection of the direct hypothesis.

Moderating Effects

The results show that emotional intelligence significantly moderates the relationship between financial literacy and financial behavior ($\beta = 0.113$, $t = 2.603$, $p = 0.009$), as well as between financial literacy and financial risk tolerance ($\beta = 0.174$, $t = 3.538$, $p < 0.001$).

Tabel 2

Hubungan Moderasi	Koefisien	T-Statistik	P-Value
EI × FL → FB	0,113	2,603	0,009
EI × FL → FRT	0,174	3,538	0,000

These findings indicate that emotional intelligence strengthens the effects of financial literacy on both outcomes.

Indirect Effects (Mediation)

The mediation analysis reveals that financial risk tolerance significantly mediates the relationship between financial literacy and financial behaviour ($\beta = 0.201$, $t = 3.481$, $p = 0.001$). Additionally, financial risk tolerance also mediates the relationship between emotional intelligence and financial behaviour ($\beta = 0.108$, $t = 2.725$, $p = 0.006$). These results confirm partial mediation effects within the structural model.

Tabel 2

Hubungan	Koefisien	T-Statistik	P-Value
FL → FRT → FB	0,201	3,481	0,001
EI → FRT → FB	0,108	2,725	0,006

Discussion

This study examined the relationships among financial literacy, emotional intelligence, financial risk tolerance, and financial behaviour among Generation Z in Central Java, Indonesia. The findings demonstrate that financial literacy is the strongest predictor of financial behaviour, while financial risk tolerance serves as a crucial mechanism that translates cognitive and emotional resources into actual financial practices. Financial literacy positively and significantly influences financial behaviour ($\beta = 0.487$, $p < 0.001$). This finding indicates that individuals with higher levels of financial knowledge tend to demonstrate more responsible financial practices, including budgeting, saving, expenditure control, and long-term financial planning. This result supports the Theory of Planned Behavior, which explains that knowledge influences attitudes and behavioural intentions that subsequently shape actual behaviour. In the context of Generation Z, financial literacy becomes increasingly important because young adults are continuously exposed to digital financial products, social media, and online consumption patterns. The results further reveal that financial literacy exerts the strongest influence on financial risk tolerance ($\beta = 0.587$, $p < 0.001$). This finding suggests that financially literate individuals possess a better understanding of risk-return trade-offs and are more capable of managing financial uncertainty. From a Behavioral Finance perspective, financial knowledge reduces information asymmetry and encourages rational decision-making. Consequently, financially literate individuals tend to be more confident when facing financial risks and uncertainties.

Financial risk tolerance also positively influences financial behaviour ($\beta = 0.342$, $p < 0.001$). Individuals with higher risk tolerance tend to exhibit better financial management practices because they can objectively evaluate financial opportunities and potential losses. Rather than avoiding risks entirely, they strategically manage uncertainty to achieve long-term financial goals. This finding highlights that effective financial behaviour is determined not by risk avoidance but by the ability to manage risks appropriately. The findings also indicate that emotional intelligence positively influences financial risk tolerance ($\beta = 0.315$, $p = 0.001$). This result suggests that emotionally intelligent individuals are better equipped to regulate emotions and cope with financial uncertainty. They are more capable of remaining calm under pressure, avoiding impulsive reactions, and evaluating financial risks objectively.

However, emotional intelligence does not directly influence financial behaviour ($\beta = -0.024$, $p = 0.715$). This finding indicates that emotional competencies alone are insufficient to shape financial behaviour among Generation Z. One possible explanation is that financial decisions among younger generations are predominantly driven by cognitive competencies, particularly financial knowledge, rather than emotional regulation alone. Additionally, extensive exposure to social media and digital consumption trends may weaken the direct influence of emotional intelligence on financial behaviour. The moderation analysis further demonstrates that emotional intelligence strengthens the influence of financial literacy on financial behaviour ($\beta = 0.113$, $p = 0.009$) and financial risk tolerance ($\beta = 0.174$, $p < 0.001$). These findings suggest that emotional intelligence functions as a complementary psychological resource that enhances the effectiveness of financial knowledge. In other words, financial literacy becomes more effective when individuals possess strong emotional regulation capabilities.

The mediation analysis reveals that financial risk tolerance significantly mediates the relationship between financial literacy and financial behaviour ($\beta = 0.201$, $p = 0.001$), as well as the relationship between emotional intelligence and financial behaviour ($\beta = 0.108$, $p = 0.006$). This finding suggests that financial risk tolerance acts as a central mechanism that transforms cognitive and emotional competencies into actual financial practices. Overall, the findings indicate that sustainable financial behaviour among Generation Z cannot be developed solely through financial education. Instead, an integrated approach that simultaneously develops financial knowledge, emotional competencies, and risk management capabilities is required to prepare young adults for increasingly complex financial environments.

Theoretical Implications

This study extends the Theory of Planned Behavior by integrating emotional intelligence and financial risk tolerance into the explanation of financial behaviour among Generation Z. Furthermore, the study enriches Behavioral Finance Theory by demonstrating that financial risk tolerance serves as a central mechanism linking cognitive and emotional resources to financial behaviour. Finally, this study proposes a moderated mediation framework, where emotional intelligence strengthens the influence of financial literacy while indirectly influencing financial behaviour through financial risk tolerance.

Practical Implications

The findings suggest that policymakers, educational institutions, and financial service providers should not solely focus on improving financial literacy. Financial education programs should also incorporate emotional intelligence development and financial risk management training to foster sustainable financial behaviour among Generation Z.

Conclusion

Financial literacy is the strongest determinant of financial behaviour among Generation Z in Central Java. Financial risk tolerance plays a significant mediating role, while emotional intelligence strengthens the effectiveness of financial literacy but does not directly influence financial behaviour. Therefore, developing sustainable financial behaviour requires the integration of cognitive competencies, emotional competencies, and risk management capabilities within financial education programs.

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