



BRIDGING FINANCIAL AND DIGITAL COMPETENCES WITH INVESTMENT RISK THROUGH THE MEDIATING POWER OF INFORMATION DISCLOSURE

PENGARUH KOMPETENSI KEUANGAN DAN DIGITAL TERHADAP RISIKO INVESTASI MELALUI PERAN MEDIASI PENGUNGKAPAN INFORMASI

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Abstract

Digital technologies are changing rapidly, and this has changed the financial services industry, especially how people decide where to invest their money. This study looks at how digital literacy, financial literacy, and fear of missing out (FOMO) affect how much risk young investors are willing to take when investing with information disclosure as a mediating variable. The research data is taken from 447 investors of Gen Y and Z in West Java and used Partial Least Squares-Structural Equation Modeling (PLSSEM). The results show that being financially literate makes people more likely to search for financial information, but it also makes them less willing to take risks when investing. This suggests that people who know a lot about money are more careful when they invest. On the other hand, FOMO has a positive effect on both information searching and risk tolerance, showing how emotions can affect people online. Digital literacy helps people be more willing to take risks, but it does not have a big effect on how much information they search. These results show how important cognitive and emotional factors are in determining how people act when it comes to IT-driven finances. The study helps with responsible digital transformation by showing how important it is for individuals to be ready to navigate fintech ecosystems. It also gives regulators, platform providers, and educators ideas on how to promote more informed and resilient investment practices.

Keywords : financial literacy, digital literacy, FOMO, information disclosure, market discipline, investment risk tolerance



Abstrak

Teknologi digital berkembang dengan sangat cepat, dan hal ini telah mengubah industri jasa keuangan, terutama dalam cara orang memutuskan ke mana mereka akan menginvestasikan uang mereka. Studi ini meneliti bagaimana literasi digital, literasi keuangan, dan rasa takut ketinggalan (FOMO) memengaruhi tingkat toleransi risiko investasi pada investor muda, dengan pengungkapan informasi sebagai variabel mediasi. Data penelitian diambil dari 447 investor Generasi Y dan Z di Jawa Barat dan dianalisis menggunakan Partial Least Squares-Structural Equation Modeling (PLS-SEM). Hasil penelitian menunjukkan bahwa semakin tinggi literasi keuangan seseorang, semakin besar kecenderungannya untuk mencari informasi keuangan, namun justru cenderung memiliki toleransi risiko yang lebih rendah dalam berinvestasi. Hal ini menunjukkan bahwa individu yang memiliki pemahaman keuangan yang baik cenderung lebih berhati-hati dalam mengambil keputusan investasi. Sebaliknya, FOMO berpengaruh positif terhadap pencarian informasi maupun toleransi risiko, yang menunjukkan bagaimana faktor emosional dapat memengaruhi perilaku seseorang di dunia digital. Literasi digital meningkatkan toleransi risiko, namun tidak memiliki pengaruh yang signifikan terhadap intensitas pencarian informasi. Temuan ini menegaskan pentingnya faktor kognitif dan emosional dalam menentukan perilaku keuangan berbasis teknologi informasi. Studi ini berkontribusi dalam mendorong transformasi digital yang bertanggung jawab dengan menunjukkan pentingnya kesiapan individu dalam menghadapi ekosistem keuangan. Selain itu, studi ini memberikan wawasan bagi regulator, penyedia platform, dan pendidik dalam mempromosikan praktik investasi yang lebih bijak dan tangguh.

Kata Kunci: literasi keuangan, literasi digital, FOMO, pengungkapan informasi, disiplin pasar, toleransi risiko investasi

1. INTRODUCTION

Innovations such as mobile trading platforms, robo-advisors, and decentralized finance (DeFi) are changing the financial services industry in a big way. These platforms use algorithmic models, big data analytics, and personalized dashboards to make it easier for everyone to access financial markets by providing convenience, real-time execution, and low costs (Akhmedov et al., 2024; Alamsyah et al., 2024; Tao et al., 2020). The rise in the use of fintech (The World Bank, 2021) shows that this technological change has made investing easier and more efficient, which has led to more people being able to participate in financial markets. However, these changes also make people worry about cybersecurity risks, algorithmic transparency, information asymmetry, and the mental stress of making decisions (Brandonisio et al., 2025).

In this situation, digital literacy is important not just as a technical skill, but also as a way of thinking that helps people understand and critically evaluate financial information they find on digital platforms (Zahwa et al., 2025). Financial literacy is also important for making smart investment choices, being aware of risks, and acting responsibly with money (Chen & Volpe, 1998; Halim et al., 2021; Lusardi, 2019; Muhamad et al., 2021; Widayastuti et al., 2024). However, knowledge alone does not shape people's investment decisions. Emotions, especially the fear of missing out (FOMO), are becoming more important in how investors act when they do not know what is going to happen. FOMO has been linked to taking more risks, making investment decisions based on how others are doing, and using fintech platforms because of



social pressure instead of smart thinking (Friederich et al., 2024; Gupta & Shrivastava, 2022; Kaur et al., 2024). This high social value and peer involvement make people feel more strongly that they need to adopt new technologies. This is an important factor in understanding how people invest in a world full of digital technology. This study uses market discipline through information disclosure as a way to connect these psychological and informational dynamics. Market discipline says that clear, timely information makes things more equal and helps people make better decisions (A. M. Soma & Merryanti, 2023; Stephanou, 2010).

In Indonesia, where the gap between access and capability is still large, these issues are especially urgent. Authorities informed that the national financial inclusion index reached 85.10% in 2022, but only 49.68% of people were financially literate (Otoritas Jasa Keuangan, 2022) and only 3.54 out of 5 people were digitally literate (KOMINFO & Katadata Insight Center, 2022). This difference shows that just having access is not enough to make sure people behave responsibly with their money online. Illegal investments in Indonesia cost the public Rp139.67 trillion between 2017 and 2023, and more than 1,200 unauthorized groups were involved (CNN Indonesia, 2024). This shows the need to have a more complete picture of how ready users are in terms of knowledge, emotional control, and access to trustworthy financial information.

This study is about Millennials (Generation Y) and Generation Z, who together make up more than 23% of Indonesia's population (Badan Pusat Statistik, 2023) and are the fastest-growing group of digital investors (PT Kustodian Sentral Efek Indonesia (KSEI), 2024). These generations grew up with technology and are very familiar with mobile financial apps and social media. However, these generations still make bad financial decisions because they are afraid of missing out, have no sufficient knowledge regarding personal finance, and a heavy reliance on digital interfaces. In the past, researchers have found that they are both the most active users of fintech platforms and the most likely to act on impulse (Gupta & Shrivastava, 2022; Kaur et al., 2024; Przybylski et al., 2013).

This study looks at how digital literacy, financial literacy, and FOMO affect Gen Y and Gen Z's willingness to take investment risks in Indonesia, with information disclosure as a mediating variable. The goal is to learn how digital transformation changes how investors act and how much risk they are willing to take in ways that go beyond infrastructure and into the areas of individual cognition, behavioral economics, and IT-enabled decision-making.

2. RESEARCH METHOD

Digital literacy includes being able to use technology to analyze, evaluate, and search for information in a clear way (DQ Institute, 2019; UNESCO, 2018). This is especially important in investing, where people have to make sense of complicated data and move quickly through platforms (Bawden, 2001; Hague & Payton, 2010; Liu et al., 2020).

Being financially literate is a key factor in making smart financial decisions. It means being able to use the knowledge about money to create a better life (Chen & Volpe, 1998). Knowledge, ability, and confidence are used to measure financial literacy in Indonesia (Otoritas Jasa Keuangan, 2020). Lusardi's "Big Three" (Lusardi, 2019) and the OECD's broader tools (Organisation for Economic Co-operation and Development, 2022, 2024) stress the importance of looking at both the technical and behavioral aspects of making financial decisions.



Fear of Missing Out (FOMO) is the worry that other people are having better experiences than the person themselves (Przybylski et al., 2013). FOMO can make people act on impulse and follow trends in the digital investment world, often without enough risk assessment (Kaloeti et al., 2021). Studies show that FOMO affects a number of behavioral biases and leads to risk-taking behavior, especially among retail and crypto investors (Friederich et al., 2024; Gupta & Shrivastava, 2022; Kaur et al., 2024).

Disclosing information is a key part of market discipline that helps control risky behavior. Market discipline has four parts: (1) the availability of consistent and reliable information, (2) the presence of independent market participants, (3) the presence of enforcement mechanisms, and (4) strong internal governance that lets investors keep an eye on institutions and respond to risk signals effectively (Stephanou, 2010).

Investment risk tolerance is how much people can handle not knowing how much money they will make in the future (Grable & Lytton, 1999). This trait has an effect on how assets are divided up and, in the end, on the investment strategy as a whole (Roszkowski & Davey, 2010). Both platform providers and policymakers need to know what makes people more or less willing to take risks.

It is important to stress that being digitally literate improves financial stability and the quality of decisions (Hague & Payton, 2010; Kass-Hanna et al., 2022). There is also a positive link between financial literacy and how it encourages people to invest in a wider range of products and diversify their portfolios (Nguyen et al., 2023; Nyakurukwa & Seetharam, 2022). FOMO has also been shown to affect how people make investment decisions by changing their behavior (Kaur et al., 2024; Kumar et al., 2024). Studies also showed that sharing information can help people make better decisions about risk and encourage safer investment behavior (Sayyadi Tooranloo et al., 2019; M. Soma et al., 2016; Stephanou, 2010). However, there has not been much research on Generations Y and Z in Indonesia, which are groups that are very affected by both digital change and unstable financial situations. This study aims to fill that gap by looking into how digital literacy, financial literacy, and FOMO together affect investment risk tolerance, with information disclosure acting as a middleman in a financial landscape that has been changed by technology.

This study suggests a way to connect behavioral finance and IT-enabled decision-making. The framework includes three independent variables: digital literacy, financial literacy, and fear of missing out (FOMO). It also includes investment risk tolerance as the dependent variable and information disclosure as a mediating variable. Digital literacy helps people use digital platforms to find, understand, and act on financial information (Hague & Payton, 2010; Kass-Hanna et al., 2022). Financial literacy, on the other hand, helps people think logically about financial risks (Grable & Lytton, 1999; M. Soma et al., 2016), which shows how important it is in digitally transformed ecosystems. FOMO, a psychological trigger that gets worse in real-time, algorithm-driven environments, has been shown to affect risky investment behavior (Friederich et al., 2024; Gupta & Shrivastava, 2022). Information disclosure is a key part of the framework because it promotes openness and reduces cognitive and informational asymmetries in digital financial systems, which is a key principle of market discipline (A. M. Soma & Merryanti, 2023; Stephanou, 2010). This study adds to the fields of IT adoption, behavioral economics, and digital governance by using structural equation modeling to look at both direct and mediated effects. It shows how user skills and emotions



interact with digital infrastructures to affect how people in Indonesia's emerging fintech landscape behave when it comes to investment risk.

This study uses a positivist paradigm and a causal quantitative design to look into how digital literacy, financial literacy, and fear of missing out (FOMO) affect investment risk tolerance, with information disclosure acting as a middleman. This study shows how behavioral factors and IT-enabled financial decision-making come together in a world that has been changed by technology. The study is aimed at Generation Y and Z investors in West Java, Indonesia, with filtering questions based on demographic and regional factors. Data were gathered through an online survey and then analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). Testing both measurement and structural models was part of the analysis to make sure that the results were valid, reliable, and robust.

3. RESULTS AND DISCUSSION

The study used quantitative primary data from a questionnaire sent out through Google Forms with a total of 447 responses. Respondents who were asked to fill out the survey were Generation Y, born between 1981 and 1996, and Generation Z, born between 1997 and 2012. According to the answers, 51.68% of the people who answered were men and 48.32% were women. Most of the respondents who answered lived in Bandung City (24.61%). Most of them were from Generation Y (Millennials), which made up 51.01% of the total. Generation Z was next, with only 10 fewer respondents. Most respondents fall into the middle-income group, which means they make between Rp2,300,000 and Rp4,600,000 per month and between Rp4,600,000 and Rp9,200,000 per month.

The questionnaire was constructed of 33 items grouped under five major domains of Digital Literacy (DL), Financial Literacy (FL), FOMO (FM), Information Disclosure (ID), and Investment Risk Tolerance (IRT). Each item was measured using a five-point Likert scale, where a score of 1 indicated "Strongly Disagree" and 5 indicated "Strongly Agree." The responses for each item were multiplied by the respective Likert scale scores, and the total scores were then calculated and converted into percentages, as visualized in Table I.

Table 1. Descriptive Analysis

Variable	No of Items	Score	Percentage	Category
Digital Literacy	9	14,139	70.29%	High
Financial Literacy	9	13,420	66.72%	Moderate
FOMO	9	13,790	68.56%	High
Information Disclosure	3	3,894	58.08%	Moderate
Investment Risk Tolerance	3	4,315	64.35%	Moderate

The descriptive analysis shows that investors from Generations Y and Z in West Java have a high level of DL (70.29%) and FM (68.56%), as well as moderate levels of FL (66.72%), ID (58.08%), and IRT (64.35%). The high DL score shows that they are capable in using digital tools and finding their way around online information systems. The FL results show that the person has a basic understanding of important financial ideas, especially when it comes to insurance and changes in the market. This means that they are somewhat ready to handle their own money and investment decisions. The FM score shows strong behavioral patterns that are shaped by social dynamics and exposure to real-time information, which is common in



environments where people are connected to the internet. Even though the respondents are good with technology, they only have a moderate understanding of how important it is to have clear and easy-to-find financial information. This shows that there is a lot of room for improvement in making sure that digital behavior is in line with responsible information governance. The moderate IRT score also shows that people would rather be financially safe than make risky investments, which shows how important it is to teach people about risk in digital financial ecosystems. These results give us important information about how digital skills and behavior affect how people take risks and make financial decisions as technology changes.

Using SmartPLS 4, the next step is to check the validity and reliability of the latent constructs based on their indicators using Composite Reliability and Cronbach's Alpha, as well as convergent validity using Average Variance Extracted (AVE). Using the Fornell-Larcker criterion, the next step is also to check for discriminant validity to make sure that different constructs do not overlap. Figure 1 below shows the results of the outer model testing.

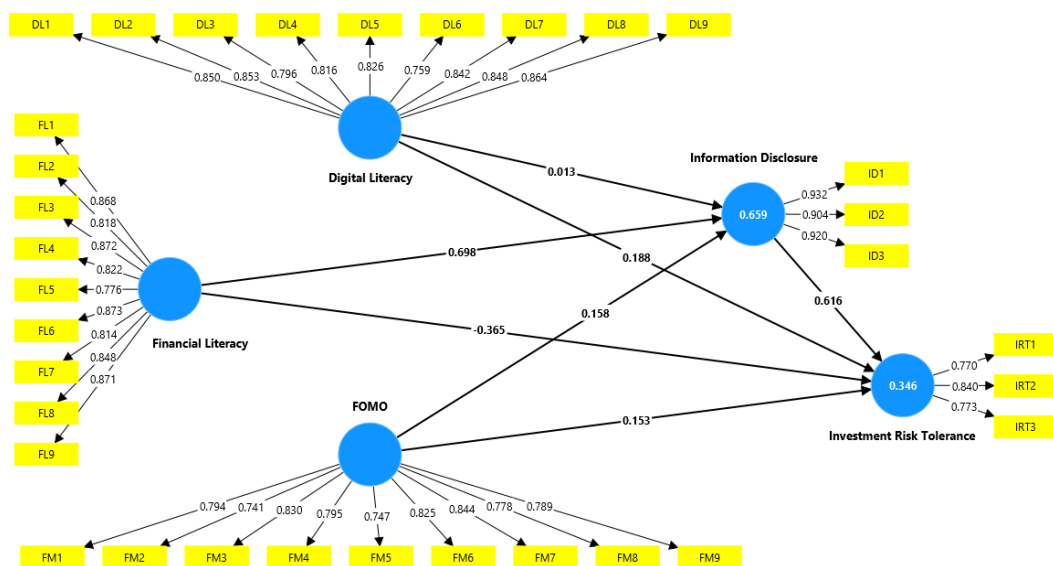


Figure 1. Outer Model Testing

Convergent validity checks to see if all the indicators for a construct are strongly related and measure the same thing. This is done by looking at the outer loading, which should be greater than 0.5, and the Average Variance Extracted (AVE), which should also be greater than 0.5 (Hair et al., 2017).

Table 2. Outer Loadings

Variable	No of Items	AVE	Conclusion
Digital Literacy	9	0.687	Valid
Financial Literacy	9	0.707	Valid
FOMO	9	0.631	Valid
Information Disclosure	3	0.844	Valid
Investment Risk Tolerance	3	0.632	Valid

Table II shows that all of the indicator items for each research variable had outer loading and



AVE values above 0.5 (Hair et al., 2017). This means that the indicators add a lot to their own constructs. All items are said to be valid in terms of convergent validity, which means that the measurement tool used in this study is acceptable for further research.

The next step in checking the measurement model is to check its discriminant validity. This is done using the Fornell-Larcker criterion to make sure that each construct does not overlap with any others. If the square root of a construct's AVE is larger than its correlations with other constructs, it is said to have discriminant validity.

Table 3. Fornell-Larcker Criterion

	FOMO	Digital Literacy	Financial Literacy	Information Disclosure	Investment Risk Tolerance
FOMO	0.794				
Digital Literacy	0.775	0.829			
Financial Literacy	0.600	0.661	0.841		
Information Disclosure	0.586	0.596	0.801	0.919	
Investment Risk Tolerance	0.440	0.432	0.343	0.525	0.795

Table III shows that all of the constructs met this requirement. For example, the square root of AVE for FM is 0.794, which is higher than its correlations with other constructs such as digital literacy (DL-FM) and financial literacy (FL-FM). Based on the cross-loading analysis, all of the items meet the criteria for discriminant validity. This supports the idea that the instrument measures each construct separately and does not overlap.

The next step is the reliability test to see how consistent the indicators were when measuring each construct. When using Cronbach's Alpha with a threshold of 0.6 and Composite Reliability with a threshold of 0.7, high reliability means that the indicators in a construct give stable and consistent results (Hair et al., 2017).

Table 4. Reliability Test Results

Variable	Cronbach's Alpha	Composite Reliability	Conclusion
Digital Literacy	0.943	0.952	Reliable
Financial Literacy	0.948	0.956	Reliable
FOMO	0.927	0.939	Reliable
Information Disclosure	0.908	0.942	Reliable
Investment Risk Tolerance	0.709	0.837	Reliable

Table IV shows that all of the constructs in this study meet or exceed the recommended levels for both Cronbach's Alpha and Composite Reliability. This result shows that the internal consistency is sufficient, which means that the indicators for each construct reliably measure the intended latent variable and can be used for more structural analysis.

The structural model (inner model) evaluation is then calculated by measuring the R^2 value and f^2 effect size to check the relationships between latent constructs in the research framework (Hair et al., 2017). The R^2 value for ID is 0.659, which means that the independent variables have a moderate level of explanatory power based on the tests that have been done. The R^2 value for IRT, on the other hand, is 0.346, which is weak but still within an acceptable



range. The next test is the f-square (f^2) test, which looks at the effect size of each independent variable on the dependent and mediating constructs in the model. The test results show that FL has a big effect on ID, with a f^2 value of 0.776, which means it has strong explanatory power. The effects of FM on ID (0.028), FL on IRT (0.062), and ID on IRT (0.198) are all small to medium, but they still play a role in the model's structure. At the same time, DL has very little effect on both ID (0.000) and IRT (0.018), which means that the effect size is very small. These results show how much each independent variable affects the dependent and mediating constructs in different ways.

Next, the hypotheses is tested to see how important the links between constructs in the structural model were and whether the proposed assumptions were correct. If the t-statistic is greater than 1.96 and the p-value is less than 0.05 at a 5% significance level (two-tailed), then the hypothesis is statistically significant (Hair et al., 2017).

Table 5. Hypotheses Testing Results

Path	Original Sample	Sample Mean	Standard Deviation	T-statistics	P-values
FM → ID	0.158	0.155	0.065	2.444	0.015
FM → IRT	0.153	0.155	0.067	2.282	0.023
DL → ID	0.013	0.016	0.056	0.225	0.822
DL → IRT	0.188	0.185	0.071	2.635	0.008
FL → ID	0.698	0.0698	0.027	26.007	0.000
FL → IRT	-0.365	-0.369	0.078	4.684	0.000
ID → IRT	0.616	0.621	0.073	8.434	0.000

Table V shows that most of the relationships in the structural model were statistically significant, with t-statistics greater than 1.96 and p-values less than 0.05. This backs up the idea that most of the hypotheses are true. For instance, FL had a strong and significant effect on ID, with a path coefficient of 0.698, a t-statistic of 26.007, and a p-value of 0.000. Additionally, FL had a big negative effect on IRT ($\beta = -0.365$; $t = 4.684$; $p = 0.000$). FM also had a big effect on both ID ($\beta = 0.158$; $p = 0.015$) and IRT ($\beta = 0.153$; $p = 0.023$). ID itself had a big positive effect on IRT ($\beta = 0.616$; $t = 8.434$; $p = 0.000$), which shows that it was a mediator in the model. The empirical data, on the other hand, did not support one hypothesis: that DL has an effect on ID. The t-statistic for this relationship was very low at 0.225 and the p-value was 0.822, which means that DL does not have a big effect on ID in this study. DL, on the other hand, was found to have a significant effect on IRT ($\beta = 0.188$; $p = 0.008$). This means that even though it may not directly make the market more transparent, it still helps people make decisions about investment risks.

Table 6. Q² Predict, RMSE, and MAE Results

Variable	Q ² Predict	RMSE	MAE
Information Disclosure	0.653	0.591	0.466
Investment Risk Tolerance	0.204	0.896	0.740

The Goodness of Fit (GoF) test is then conducted to see how well the research model explained the phenomenon. The Q² Predict value for ID is 0.653, which means it is very relevant for predicting. The Q² value for IRT, on the other hand, is 0.204, which puts it in the



moderate range. Also, the model's predictive accuracy is further supported by the fact that the RMSE and MAE values are relatively low. The model's fit is also calculated using the Normed Fit Index (NFI), which had a value of 0.778, and the Standardized Root Mean Square Residual (SRMR), which had a value of 0.070. Overall, these results show that the structural model fits well and can be used for further analysis and interpretation.

Discussion

The structural model shows that FL has a statistically significant effect on both ID and IRT, based on the tests that have already been done. The positive path coefficient from FL to ID ($\beta = 0.698$, $t = 26.007$, $p < 0.001$) suggests that investors who are more financially literate are more likely to search for financial information such as financial reports, which strengthens the market discipline mechanism. On the other hand, the negative relationship between FL and IRT ($\beta = -0.365$, $t = 4.684$, $p < 0.001$) means that people who are more financially literate are less willing to take risks. These results show that financial literacy is very important for both being open and honest and being able to make smart decisions about risk among the respondents.

The analysis shows that DL has different roles in the model's constructs. The link between LD and ID is not statistically significant ($\beta = 0.013$, $t = 0.225$, $p = 0.822$), which means that in this study, digital literacy does not significantly help make information more clear. DL, on the other hand, has a positive and significant effect on IRT ($\beta = 0.188$, $t = 2.635$, $p = 0.008$), which suggests that being digitally competent makes people feel more comfortable with investment risks. This means that digital literacy may not directly encourage people to search for information, but it does help people take risks with more knowledge and confidence. This shows how important digital skills are for making online financial content easier to find.

The path from FM to ID is positive and statistically significant, with a coefficient of 0.158, a t-statistic of 2.444, and a p-value of 0.015. This means that people who feel more FOMO are more likely to search for information because they feel the need to stay informed, connected, and socially relevant in investment communities. The path from FM to IRT is also statistically significant, with a coefficient of 0.153, a t-statistic of 2.282, and a p-value of 0.023. These results show that FOMO not only makes people more likely to seek out and search for information, but it also makes them more willing to take investment risks. This two-way effect shows that FOMO is both a mental and emotional driver of fintech adoption, making young investors more likely to take risks and search for information.

The analysis shows that ID has a strong and meaningful positive effect on IRT, with a path coefficient of 0.616, a t-statistic of 8.434, and a p-value of 0.000. These numbers show that investors are more willing to take risks when they have more information. Also, multiple independent variables have a big effect on information disclosure, which makes it an even better mediator between financial literacy, digital literacy, FOMO, and behavior related to risk.

4. CONCLUSION

The study's results show that Generation Y and Z investors' willingness to take risks with their financials is greatly affected by their level of financial literacy and FOMO, both directly and through the role of information disclosure. People with adequate financial knowledge are more likely to search for information but less likely to take risks with their



investments, meaning that they tend to be more cautious investors. On the other hand, FOMO makes people more likely to search for information and take risks, which shows that emotions can lead people to act in ways that are riskier. Digital literacy makes people more willing to take risks, but it does not have a big effect on how much information they search for. This shows that being good with technology does not always mean being more open about personal finances. These results show that cognitive factors, especially financial literacy, are more important than emotional or technological factors in shaping market discipline through disclosure.

Based on these results, young investors should work on improving their financial literacy so they can make smart and informed investment decisions. This will help digital financial ecosystems be more open and honest. Regulators like the Financial Services Authority (OJK) and the Ministry of Communication and Informatics (Kominfo) should keep pushing for financial education that is open to everyone and easy to understand, and they should also enforce rules that protect investors and make data more available. Banks and other financial institutions are encouraged to offer not only services that focus on products, but also programs that teach people about risk and ethical investing. Fintech platforms and institutions should also work together to make adaptive learning environments that combine digital fluency with financial responsibility, ensuring digital transformation goes hand in hand with making smart choices and keeping the market honest.

The study's geographic scope and the fact that it used a cross-sectional design limit what it can tell about how investors' behavior changes over time. Future studies should look at more regions and use longitudinal designs to better capture changing patterns and cause-and-effect relationships. More research could also improve the current model by adding more variables or expanding the pool of respondents to include older investors and people from different economic backgrounds. It could also look into IT variables like algorithmic trust, cybersecurity awareness, and regulatory technologies in fintech systems to learn more about how they affect investor behavior. Also, studies that compare traditional and AI-based financial tools can help us understand how automated platforms affect the way we think and feel when making decisions. In line with the larger conversation about digital transformation, IT governance, and behavioral finance, these directions would help create fintech ecosystems that are more resilient, open, and user-friendly.

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