



Factors Affecting the Intention to Invest in Crypto Assets Among Indonesian Youth

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ABSTRACT

This study aims to determine the role of financial risk tolerance in mediating the impact of digital financial literacy, investment experience, and e-payment behavior on intention to invest. This research method used explanatory research with a cross-sectional survey and as many as 215 respondents that are used for analysis hypothesis testing uses a structural equation model (SEM) and is processed using Smart PLS-SEM. This research proves that there is a positive and significant role of financial risk tolerance in mediating the impact of digital financial literacy, investment experience, and e-payment behavior on intention to invest in crypto asset. These results further reinforce that a higher risk tolerance will affect the intention to invest in higher-risk financial products. In addition, this study shows that most members of the younger generation have a level of risk tolerance or risk profile that falls into the moderate category or loss-adverse category in the aspects of risk speculation, investment risk, and financial risk evaluation. This study provides policy directions for related parties to increase digital finance adoption and financial literacy in the context of financial inclusion. This research reinforces that digital financial literacy is important, especially in terms of digital financial knowledge for young people. This study uses the risk tolerance profile variable as a variable that mediates the relationship between digital financial literacy and investment intentions in crypto asset using consumer behavior theory.

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1. INTRODUCTION

The pros and cons of using crypto assets as a form of payment are a global phenomenon. Several studies state that their benefits are easily accessible, transferable, exchangeable, and tradeable from nearly anywhere in the world. On the other hand, they have spawned illegal activities such as money laundering, which is illegal. In Indonesia, crypto assets are prohibited as media of payment but allowed as a commodity subject as a form of investment assets (Soehartono & Pati, 2019). A crypto asset is defined as a private digital asset (Houben & Snyers, 2020). Crypto in Indonesia has started to develop and is starting to be owned by individuals and companies. However, accounting standards for treating digital currencies such as Bitcoin and other cryptocurrencies, were still evolving, including in Indonesia. Still, no specific accounting standard provided comprehensive guidance on the accounting treatment of digital currencies. Therefore, research on crypto assets is still relevant and interesting for discussion.

Previous researchers have conducted various studies on crypto assets. User adoption rate is a proved factor that influences the movement of returns and price volatility of crypto assets (Liu & Tsyvinski, 2021). Researchers studying the intention to invest in crypto assets have relied on the theory of intention to use. The factors that influence intention to invest in crypto assets include financial awareness (Ayedh et al., 2020); (Echchabi et al., 2021), investment experience (Zhao & Zhang, 2021), financial knowledge (Echchabi et al., 2021); (Zhao & Zhang, 2021); (Gupta et al., 2021), financial attitude (Almajali et al., 2022); (Soomro et al., 2022); (Norisnita & Indriati, 2022), perceived ease of use (Ayedh et al., 2020); (Almajali et al., 2022); (Echchabi et al., 2021), perceived risk (Almajali et al., 2022); (Hasan et al., 2022); (Sukumaran et al., 2022), perceived value (Hasan et al., 2022); (Sukumaran et al., 2022), perceived benefits (Hasan et al., 2022), and perceived behavioral control (PBC) (Huong & Phuong, 2021); (Soomro et al., 2022).

Crypto alternative investment that carries high levels of risk, investors who intend to invest in crypto assets must have good financial literacy, investment experiences in high-risk financial instruments, and have a risk profile as risk seekers. The study of the relationship between risk tolerance and intention to invest carried out by Gazali et al. (2018) proved that financial risk tolerance affects the intention to invest in cryptocurrency. However, Sukumaran et al. (2022) proved that perceived risk has no influence on intention to invest in crypto. Lends supported Ahmad Fauzi et al. (2017), saying that financial risk tolerance is one of the predictors of investment behavior. However, risk-taking consumers tend to disregard the warnings and view them as an incentive to invest more. This indicates that those who perceive themselves as having higher risk tolerance are still willing to invest despite the fact that there are many uncertainties associated with that type of investment. Stix (2019) states that crypto owners, on average, are more risk-tolerant than non-owners and have higher financial knowledge. Previous studies proved that the main reason of investors for investing in cryptocurrencies is that they have a good level of financial knowledge (Gupta et al., 2021). Adil et al. (2022) proved that FL has a positive impact on intention to invest. Conversely, Pham et al. (2021) reported no influence on intention to invest in crypto.

Previous research primarily discusses crypto assets' intention to invest using behavioral finance theory. Behavioral finance theory explains how humans behave in a financial decision (Baker & Nofsinger, 2010). Behavioral Finance Theory becomes relevant when associated with investment. In this study, the object of behavioral finance is risk tolerance as mediating role on the relationship between financial literacy and investment intention. Financial literacy in this study consists of knowledge, experience, and e-payment behavior. Financial Behavioral Finance Theory becomes relevant when associated with investment decisions. Better investment

decision indicates better financial literacy. (Chawla et al., 2022) revealed that financial literacy has a positive effect on investment decisions.

2. METHODS

This study was conducted in Indonesia using a survey method and explanatory research to determine the role of financial risk tolerance in mediating the impact of digital financial literacy, investment experience, and e-payment behavior on intention to invest. Criteria for selecting the samples is individuals who knew or had ever heard of crypto assets. Data were collected by a simple random sampling technique using a self-administered online survey questionnaire. The questionnaire was sent through e-mail, WhatsApp, Telegram, and Direct Message on Instagram. A total of 215 respondents completed the questionnaire with valid responses. The sampling fulfilled the minimum sample size suggested by Hair et al. (2016): with 25 indicators, the minimum sample size is 125–200. In other words, the sample size of 215 met the minimum sample size requirement.

The questionnaire consists of 25 items, including 4 (four) indicators of investment intention (IIC1–IIC4), 3 (three) indicators of investment experience (IEX1–IEX3), 6 (six) indicators of digital financial literacy (DFL1–DFL6), 6 (six) indicators of financial risk tolerance (FRT1–FRT6), and 8 (eight) indicators of e-payment behavior (EPB). Therefore, each variable was constructed using relevant indicators as shown in Table 3. Regarding the measures for DFL, this study proposed six indicators of subjective digital financial knowledge. Digital financial literacy (DFL), investment experience (IEX), e-payment behavior (EPB), and investment intention (IIC) were measured on a 4-point Likert scale, where 1 = strongly disagree, 2 = disagree, 3 = agree, and 4 = strongly agree. Financial risk tolerance measures employed risk tolerance measure items. The total risk tolerance score was obtained by summing (adding up) the individual scores from the four questions. Then, the score was scaled in a range of 1 to 4, with 1 being the most risk-averse and 4 being the most willing to take risk (Gilliam et al., 2010). Based on this scale, the investor types were divided up into four, namely 1 = conservative investors/risk avoider (the risk tolerance was low), 2 = moderate investor/loss-averse (the risk tolerance was medium), 3 = growth investor/loss-tolerant (the risk tolerance was high), and 4 = aggressive investor/risk seeker (the risk tolerance was very high) (Pompian, 2018) (Grable et al., 2020). This study has been derived from Dew & Xiao (2011), Gunawan et al. (2021), and Zulaihati et al. (2020). This study used the partial least square-structural equation modeling (PLS-SEM) method (Hair et al., 2017) to estimate the model of relations among digital financial knowledge (DFK), e-payment behavior (EPB), investment experience (IEX), financial risk tolerance (FRT), and investment intention in crypto assets (IIC). All variables were constructed as latent variables. The partial least square-structural equation modeling (PLS-SEM) is used to predict relationships between constructs, confirm theories and used to explain the relationship between latent variables. The partial least square-structural equation modeling (PLS-SEM) uses two elements which is the structural model evaluation (inner model), to estimate the relationships between latent variables. and the measurement model (outer model) to estimate relationships between latent variables and their indicators.

3. RESULTS AND DISCUSSION

Table 1 shows the gender profile distribution with 67% males and 33% females. Most of the respondents were single (63.3%). About 58% of the respondents were aged 25–54. The majority of the respondents had expenditure in the range IDR 1.2–6 million or US\$7.76–38 (43%) and > IDR 6 million or > US\$38 (27%).

Table 1. Demographic and socio-economic data

Criteria	Number	%
Gender		
Male	144	67
Female	71	33
Age		
15–24 years old	124	58
> 25 years old	91	42
Marital Status		
Married	58	27
Single	157	73
Households with expenditure per capita per month		
≤ IDR 1.2 m or ≤ US\$7.75	64	30
IDR 1.21–6.0 m or US\$7.76–38	92	43
>IDR 6 m or > US\$38	59	27

Source: Survey data (2023)

Table 2 shows the levels at which financial risk tolerance (FRT) affected speculative risk, investment risk, and evaluated financial risk. It is apparent from **Table 2** that very few of the respondents have low level of FRT. About 29% at a medium FRT level, on speculative risk aspects. This shows that most of the respondents were risk-seeking investors or risk-takers. Interestingly, in terms of investment risk and evaluated financial risk, most of the respondents (respectively, 47% and 52%) had a high FRT level, making them growth investor

Table 2. Dimensions and indicators of FRT

Dimensions and Indicators	Risk Tolerance Levels and Four Basic Investor Types			
	Conservative Investors (1)	Moderate Investors (2)	Growth Investors (3)	Aggressive Investors (4)
	Low = risk avoider	Medium = loss-averse	High = loss-tolerant	Very high = risk seeker
FRT1-Speculative Risk (%)	1	29	46	24
1. Suppose that before tossing a coin (side A: fish head, side B: fish tail), you are asked to choose one of the following options for the prize you will receive. A. Guess which side (A or B) will appear, and you will receive IDR 100,000. B. If you guess that side A will appear, you will receive IDR 200,000. If it is side B that appears, you will not receive anything. 2. Suppose you won a quiz with a cash prize of IDR 500,000. You are given the opportunity to choose: C. Take IDR 500,000 which you have won and abandon the next opportunity. D. Take the second quiz round with an 80% chance of winning IDR 1 million, but if you lose, then you will receive nothing at all.				
FRT2-Investment Risk (%)	2	31	47	20
If you unexpectedly received IDR 100 million to invest, what would you invest the funds in: A. 100% savings and deposits B. 50% savings & time deposits, 50% mutual funds C. 50% mutual funds and 50% stocks D. 100% stocks				
FRT3-Evaluated Financial Risk (%)	1	33	52	14
How many losses can you accept in investing: A. 0% B. Up to 50% C. Up to 75% D. 100%				
FRT4-Perception of high-risk investment (%)	0	22	46	32
I find it very comfortable to invest in shares.				
FRT5-Perception of speculation decisions (%)	1	25	56	18
I prefer the 5% chance at winning \$1,000 than an assured amount of \$100 in a game show.				
FRT6-Perception of Diversification Risk (%)	1	28	51	20
If I have some amount of money, I will prefer 10% low-risk investment, 40% medium-risk investment, and 50% high-risk investment.				

Source: Survey Data, computing using Microsoft Excel (2023)

Table 3 shows the measurement model (outer model) used to evaluate validity and reliability, while **Table 4** shows the results of the structural model evaluation (inner model), which explains the relationship between the variables DFL, EPB, FRT, IEX, and IIC. The evaluation of the outer model included the evaluation of indicator reliability (loading factor value), composite reliability (CR), convergent validity (CRA) (see **Table 3**), and discriminant validity (Fornell-Larcker criterion) (see **Table 4**). Meanwhile, the structural model evaluation consisted of collinearity (see **Table 3**), significance and relevance of path coefficient, effect size (f^2) (see **Table 5**), and prediction model (Q^2) (see **Table 6**). **Table 3** provides the outer model estimations, showing that the model was reliable and valid as there were no values of composite reliability less than 0.7 and the convergent validity (AVE) was less than 0.5 (Hair et al., 2017) (Ringle et al., 2018). Based on **Table 3**, all indicators had a loading factor of more than 0.6. This study still maintained the latent variable indicator with a loading factor of 0.6 based on Hair et al. (2014). The inner model estimations show that no indicator had a collinearity problem. The results of the collinearity test in **Table 9** show that all indicators had a VIF value of less than 5 (Hair et al., 2017).

Figures 1 and 2 show the estimation of the structural models and the relations among the variables and their indicators with each loading factor. **Figure 1** explains the path coefficient of each independent variable in affecting its dependent variable. Meanwhile, Figure 2 explains the t-test of each independent variable. The relationship between DFL, IEX, EPB, FRT, and IIC was tested. Further analysis showed the relationship between DFL and FRT. A positive correlation was found between digital financial literacy (DFL) and financial risk tolerance (FRT) at a 5% confidence interval level (see **Figure 1**). The coefficient of DFL of 0.242 indicates that the direct contribution of DFL to FRT amounted to approximately 6% ($= 0.242^2$). The result is consistent with the findings of Samanez-Larkin et al. (2020), Tavor & Garyn-Tal (2016), and Wang (2009), who established the relationship between financial literacy and financial risk tolerance. Other researchers found that people who have high digital financial literacy tend to be more risk-tolerant, causing them to fall into the category of risk seekers (Nguyen et al., 2022). Our study is in line with that of Zhao & Zhang (2021), who established the relationship between financial literacy and investing in crypto.

This study provides further evidence for the relationship between EPB and FRT. **Figure 1** shows that e-payment behavior (EPB) had a positive effect on financial risk tolerance (FRT). The coefficient of EPB of 0.247 indicates that the direct contribution of EPB to FRT amounted to 6.1% ($= 0.247^2$). From the result, it was concluded that EPB significantly affected FRT. The result also indicates that people will have high risk tolerance if they use e-payment more in their financial activity. The same finding as this research had been found by Morgan & Trinh (2020). Our findings proved that investment experience (IEX) had a positive effect on financial risk tolerance (FRT). The coefficient of IEX of 0.395 indicates that the direct contribution of IEX to FRT amounted to 15.6% ($= 0.395^2$). From the result, it was concluded that IEX significantly affected FRT. This substantiates previous findings in the literature by Zhao & Zhang (2021), who established the relationship between investment experience and investing in crypto.

Further analysis showed that financial risk tolerance (FRT) in turn had a positive effect on investment intention (IIC). The coefficient of FRT of 0.500 indicates that the direct contribution of FRT to IIC amounted to 25% ($= 0.500^2$). This study supports the previous findings by Kasoga (2021), Samsuri et al. (2019), and Nguyen et al. (2016) that FRT affects investment intention. This indicates that there is an important link between risk tolerance and financial behavior. This substantiates previous findings in the literature that financial risk tolerance plays a role in shaping individual financial behaviors (Grable, 2008) (Grable, 2016).

Table 6 shows that the Q^2 values for financial risk tolerance and intention to invest were 0.548 and 0.286, respectively, greater than the cut-off value of zero. This indicates that the model had predictive relevance (Chin, 2010) (Jamal et al., 2016). **Table 7** shows the role of FRT as a complementary partial mediator in the relationship between DFL, IEX, and EPB. Meanwhile, on IIC, DFL, and EPB (no mediation) it had a significant direct effect and an insignificant indirect effect. Further statistical tests revealed the R^2 value of 0.544 for the relationship of the independent variable financial risk tolerance to the latent variables investment experience, e-payment behavior, and digital financial literacy, to suggest a positive correlation and the R^2 value of 0.246 for the relationship of the independent variable financial risk tolerance to intention to invest to suggest a positive correlation; this indicates moderate or strong relationships between the independent and dependent variables (see **Table 7**)

Table 3. Measurement model evaluation-validity and reliability test Number and percentage of respondents (N = 215)

Variables and Indicators	Code	VIF	Loading Factor	CR	AVE	t-statistic	Conclusion
Criteria		< 5	> 0.6	> 0.7	> 0.5	> 1.96	
Investment Experience (IEX)				0.709	0.711		Reliable
Spread fund across several types of investment	IEX1	1.590	0.880			41.570	Valid
Have company stock	IEX2	1.948	0.861			34.053	Valid
Hold risky assets	IEX3	1.715	0.812			23.942	
Digital Financial Knowledge (DFK)				0.900	0.602		Reliable
Regularly use digital payment to pay bills	DF1	1.914	0.792			28.569	Valid
Regularly use digital payment to buy things	DF2	2.156	0.752			20.791	Valid
Be familiar with how to use a digital finance	DF3	1.985	0.781			26.673	Valid
Make a transaction with a bank account using a mobile phone	DF4	2.385	0.821			30.066	Valid
Be familiar with how to use a digital wallet	DF5	2.101	0.801			31.131	Valid
Assess self-knowledge about digital investment	DF6	1.484	0.703			19.227	Valid
e-Payment Behavior (EPB)				0.954	0.724		Reliable
e-payment systems save my time	EPB1	2.960	0.848			36.299	Valid
e-payment systems save my money	EPB2	2.003	0.774			30.859	Valid
e-payment systems are better than cash	EPB3	2.778	0.827			32.698	Valid
Be alert to security issues of e-payment	EPB4	4.140	0.899			60.930	Valid
e-payment offers a greater choice	EPB5	2.928	0.841			35.521	Valid
e-payment systems can be readily adopted	EPB6	3.462	0.868			43.044	Valid
e-payment systems can be easily used	EPB7	4.118	0.888			55.345	Valid
Be aware of the potential risks of e-payment	EPB8	3.338	0.856			36.668	Valid
Financial Risk Tolerance (FRT)				0.922	0.663		Reliable
Speculative risk	FRT1	1.648	0.718			19.628	Valid
Investment risk	FRT2	2.763	0.862			46.493	Valid
Evaluated financial risk	FRT3	2.229	0.821			32.414	Valid
Perception of high-risk investment	FRT4	2.485	0.840			43.505	Valid
Perception of speculation decisions	FRT5	2.084	0.812			35.751	Valid
Perception of diversification risk	FRT6	2.324	0.826			36.490	Valid
Investment Intention (IIC)				0.920	0.742		Reliable
Tend to invest in "crypto assets" rather than other risky assets	IIC1	2.505	0.840			29.787	
Tend to invest in "crypto assets" because they provide high return	IIC2	1.965	0.829			31.195	Valid
Tend to invest in "crypto assets" due to trust	IIC3	3.190	0.901			56.882	Valid
Tend to invest in "crypto assets" due to financial goals	IIC4	2.281	0.873			46.072	Valid

Source: SEM analysis; the calculation used the partial least squares regression method (2023)
 Note: VIF = Collinearity statistic less than 5 (no collinearity problem); the p-value is less than a significance level of 5%.

Table 4. Discriminant Validity, Fornell-Larker Criterion

	DFL	EPB	FRT	IEX	IIC
Digital financial knowledge (DFL)	0.776				
Electronic payment behavior (EPB)	0.695	0.851			
Financial risk tolerance (FRT)	0.609	0.613	0.814		
Investment experience (IEX)	0.494	0.500	0.638	0.843	
Investment intention (IIC)	0.388	0.368	0.500	0.524	0.861

Source: SEM analysis; the calculation used the partial least squares regression method (2023).

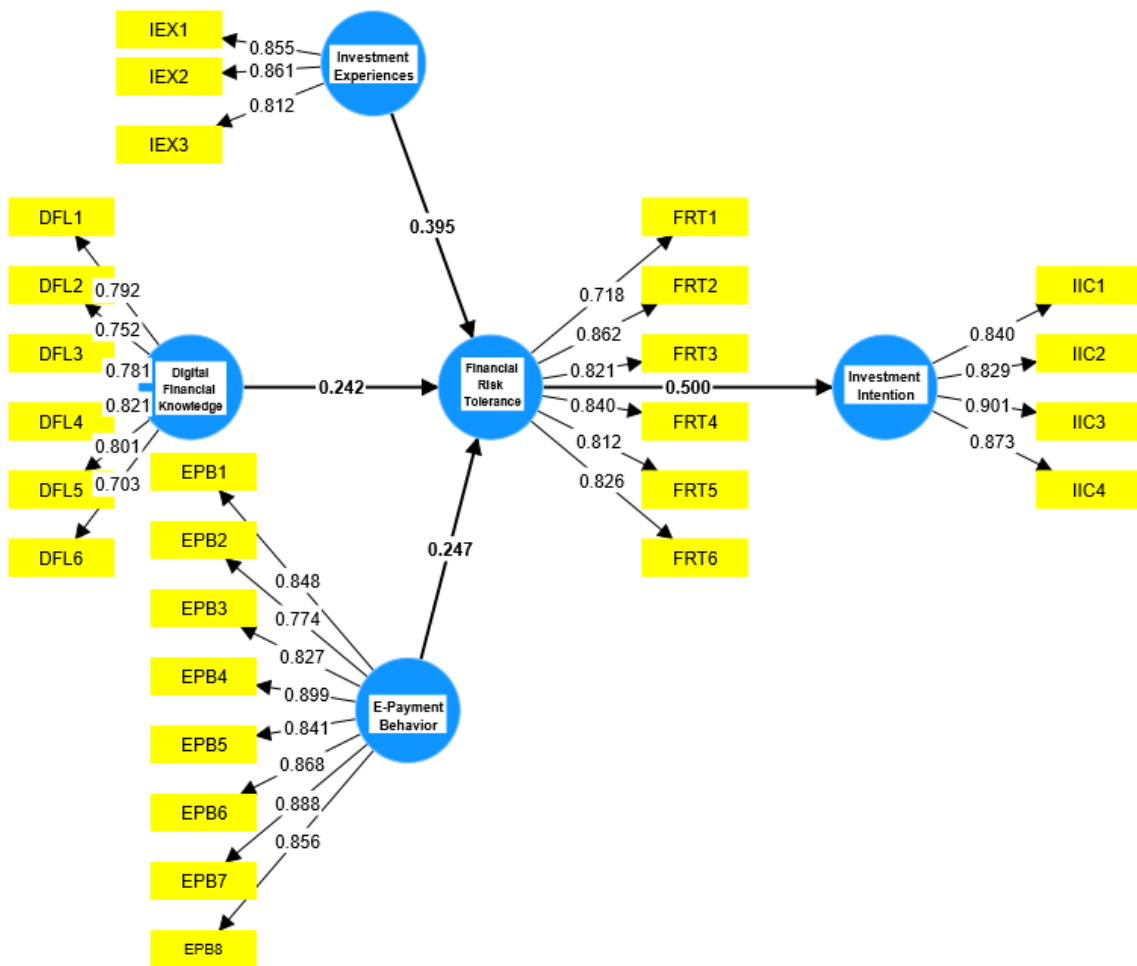


Figure 1. Path Coefficients of the Structural Model

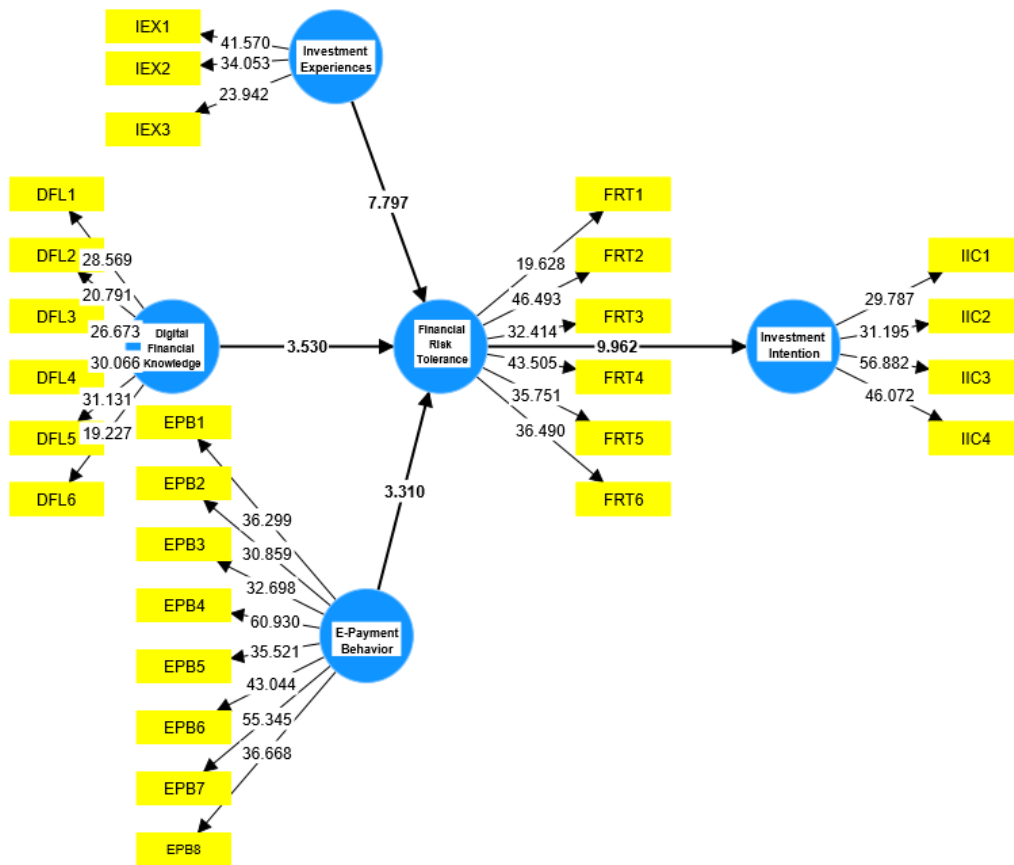


Figure 2. Structural Measurement t-values

Table 5. Structural Model Evaluation

Direct Effect	Original Sample (O)	t-statistics	p-values	Sig	f Square
Digital Knowledge -> Financial Risk Tolerance	0.242	3.530	0.000	significant	0.064
Electronic Payment Behavior -> Financial Risk Tolerance	0.247	3.310	0.001	significant	0.066
Financial Risk Tolerance -> Investment Intention	0.500	9.962	0.000	significant	0.333
Investment Experience -> Financial Risk Tolerance	0.395	7.797	0.000	significant	0.246

Source: SEM analysis; the calculation used the partial least squares regression method (2023). Effect size criteria: f square (f²) = 0.02 (low); f² = 0.15 (moderate); f² = 0.35 (high)

Table 6. Prediction Model Evaluation Stone-Geisser's Q^2

Variable	Q^2 Predict
Financial risk tolerance	0.548
Investment intention	0.286

Source: SEM analysis; the calculation used the partial least squares regression method (2023). Predictive relevance criteria: $Q^2 > 0$ (Hair et al., 2017) (Ringle et al., 2018)

Table 7. R Square

Variable	R square	R square adjusted
Financial risk tolerance	0.551	0.544
Investment intention	0.250	0.246

Source: SEM analysis; the calculation used SmartPLS 4 (2023)

R^2 criteria: $R^2 = 0.19$ (low); $R^2 = 0.33$ (moderate); $R^2 = 0.67$ (high)

Prior studies have noted the importance of having a high level in financial literacy and risk tolerance for investors who intend to invest in high-risk assets. This study sets out with the aim of assessing the importance of having good financial literacy in the intention to invest in high-risk assets, with risk tolerance as a mediating role. Then, this finding confirms the association between these variables. The current study found that financial risk tolerance is a mediating factor that influences digital financial literacy, investment experience, and electronic payment behavior on investment intentions. Another important finding was that there were positive relations among variables. This result has further strengthened our conviction that higher risk tolerance will be significant for the intention to invest in higher risk financial products. This finding concurs with Kasoga (2021), Samsuri et al. (2019), and Nguyen et al. (2016) that risk tolerance influences investment decisions positively. Mishra (2018) supported by arguing that the high-risk level of an investor plays a significant and positive part in their decision-making. The present findings seem to be consistent with other research which found by Gupta et al. (2021); Adil et al. (2022) that investors who investing in cryptocurrencies have a good level of financial knowledge. Better financial literacy, better investment decision. The findings of the current study are consistent with those of Samsuri et al. (2019) who proved the relationship between financial literacy, risk tolerance and investment intention. Investors who intend to invest in crypto assets must have good financial literacy, have investment experiences in high-risk financial instruments, and have a risk profile as risk seekers. This finding has important implications for developing the regulations and policies in asset crypto as an alternative investment that carries high levels of risk. Consumer Behavior in the use of financial digital products is an important issue for future research. Future studies on the current topic are therefore recommended.

4. CONCLUSION

The findings of this study suggest that financial risk-tolerance, digital financial literacy, and e-payment behavior influence the intention to invest in crypto assets. This research study also found that there are positive relations among Digital Financial Literacy, Electronic Payment Behavior, Investment Experience, Financial Risk Tolerance, and Intention to Invest in Crypto Asset. Based on the results, digital financial literacy, investment experience, and e-payment behavior are important factors in investors' higher financial risk tolerance, which in turn can affect intention to invest in crypto assets.

This research reveals that digital financial literacy, investment experience, and e-payment behavior play a role in shaping individual investment decisions through financial risk tolerance. The support for the hypothesis suggests that investors who are ready to take a risk are ready to invest in crypto assets. This study provides policy recommendations for related parties in order to enhance digital finance adoption and financial literacy in the context of financial inclusion. This study underlines the importance of digital financial literacy, particularly for young people.

5. REFERENCES

- Adil, M., Singh, Y., & Ansari, M. S. (2022). Does Financial Literacy Affect Investor's Planned Behavior As A Moderator? *Managerial Finance*, 48(9–10), 1372–1390.
- Ahmad Fauzi, A. W., Husniyah, A. R., Mohamad Fazli, S., & Mohamad Amim, O. (2017). Financial Risk Tolerance as a Predictor for Malaysian Employees' Gold Investment Behavior. *Eurasian Studies in Business and Economics*, 7, 63–76.
- Almajali, D. A., Masa'Deh, R., & Dahalin, Z. M. d. (2022). Factors Influencing The Adoption of Cryptocurrency in Jordan: An Application Of The Extended TRA Model. *Cogent Social Sciences*, 8(1), 1–26.
- Ayedh, A., Echchabi, A., Battour, M., & Omar, M. (2020). Malaysian Muslim Investors' Behaviour Towards The Blockchain-Based Bitcoin Cryptocurrency Market. *Journal of Islamic Marketing*, 12(4), 690–704.
- Chawla, D., Bhatia, S., & Singh, S. (2022). Parental Influence, Financial Literacy and Investment Behaviour of Young Adults. *Journal of Indian Business Research*, 14(4), 520–539.
- Chin, W. W. (2010). How to Write Up and Report PLS Analyses. *Handbook of Partial Least Squares*, 655–690.
- Dew, J., & Xiao, J. (2011). The Financial Management Behavior Scale: Development and Validation. *Journal of Financial Counseling and Planning*, 22(1), 43–59.
- Echchabi, A., Omar, M. M. S., & Ayedh, A. M. (2021). Factors Influencing Bitcoin Investment Intention : The Case of Oman. *International Journal of Internet Technology and Secured Transactions*, 11(1), 1–15.
- Gazali, H. M., Ismail, C. M. H. B. C., & Amboala, T. (2018). Exploring the Intention to Invest in Cryptocurrency: The Case of Bitcoin. *Proceedings - International Conference on Information and Communication Technology for the Muslim World 2018, ICT4M 2018, March 2021*, 64–
- Gilliam, J., Chatterjee, S., & Grable, J. (2010). Measuring the Perception of Financial Risk Tolerance: A Tale of Two Measures. *Journal of Financial Counseling and Planning*, 21(2), 40–53.
- Grable, J. E. (2008). Risk Tolerance. In *Handbook of Consumer Finance Research* (pp. 3–19). Springer, New York, NY.
- Grable, J. E. (2016). Financial Risk Tolerance. In *Handbook of Consumer Finance Research* (pp. 19–31). Springer, Cham.
- Grable, J. E., Joo, S. H., & Kruger, M. (2020). Risk Tolerance and Household Financial Behaviour: A Test of the Reflection Effect. *IIMB Management Review*, 32(4), 402–412.

- Gunawan, V., Dewi, V. I., Iskandarsyah, T., & Hasyim, I. (2021). Women's Financial Literacy: Perceived Financial Knowledge and Its Impact on Money Management. *Economics and Finance in Indonesia*, 67(1), 63–74.
- Gupta, S., Gupta, S., Mathew, M., & Sama, H. R. (2021). Prioritizing Intentions Behind Investment In Cryptocurrency: A Fuzzy Analytical Framework. *Journal of Economic Studies*, 48(8), 1442–1459.
- Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2017). A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM). *Sage*, 390.
- Hasan, S. Z., Ayub, H., Ellahi, A., & Saleem, M. (2022). A Moderated Mediation Model of Factors Influencing Intention to Adopt Cryptocurrency among University Students. *Human Behavior and Emerging Technologies*, 2022, 1–14.
- Huong, N. T. M., & Phuong, P. M. (2021). Factors for Tax Compliance of Businesses, a Case Study on Small and Medium Enterprises in Quang Ninh Province, Vietnam. In *Proceedings of the International Conference on Emerging Challenges: Business Transformation and Circular Economy (ICECH 2021)* (Vol. 196, Issue November).
- Jamal, A. A. A., Ramlan, W. K., Mohidin, R., & Osman, Z. (2016). Determinants of Savings Behavior Among University Students In Sabah, Malaysia. *International Journal of Accounting, Finance and Business*, 1(1), 24–37.
- Kasoga, P. S. (2021). Heuristic Biases and Investment Decisions: Multiple Mediation Mechanisms of Risk Tolerance and Financial Literacy—A Survey at The Tanzania Stock Market. *Journal of Money and Business*, 1(2), 102–116.
- Liu, Y., & Tsyvinski, A. (2021). Risks and Returns of Cryptocurrency. *Review of Financial Studies*, 34(6), 2689–2727.
- Mishra, R. (2018). Financial Literacy, Risk Tolerance and Stock Market Participation. *Asian Economic and Financial Review*, 8(12), 1457–1471.
- Morgan, P. J., & Trinh, L. Q. (2020). *Fintech and Financial Literacy in Viet Nam* (ADB Working Paper Series).
- Nguyen, Linh T.M., Gallery, G., & Newton, C. (2016). The Influence of Financial Risk Tolerance on Investment Decision-Making in a Financial Advice Context. *Australasian Accounting, Business and Finance Journal*, 10(3), 3–22.
- Nguyen, Linh Thi My, Nguyen, P. T., Tran, Q. N. N., & Trinh, T. T. G. (2022). Why Does Subjective Financial Literacy Hinder Retirement Saving? The Mediating Roles of Risk Tolerance and Risk Perception. *Review of Behavioral Finance*, 14(5), 627–645.
- Norisnita, M., & Indriati, F. (2022). Application of Theory of Planned Behavior (TPB) in Cryptocurrency Investment Prediction: A Literature Review. *Journal of Economics and Business*, 5(2), 181–188.
- Pham, Q. T., Phan, H. H., Cristofaro, M., Misra, S., & Giardino, P. L. (2021). Examining the Intention to Invest in Cryptocurrencies. *International Journal of Applied Behavioral Economics*, 10(3), 59–79.
- Ringle, C. M., Sarstedt, M., Mitchell, R., & Gudergan, S. P. (2018). Partial Least Squares Structural

- Equation Modeling in HRM Research. *The International Journal of Human Resource Management*, 31(12), 1617–1643.
- Samanez-Larkin, G., Mottola, G., Heflin, D., Yu, L., & Boyle, P. (2020). *Overconfidence in Financial Knowledge Associated with Financial Risk Tolerance in Older Adults*. PsyArXiv.
- Samsuri, A., Ismiyanti, F., & Narsa, I. M. (2019). Effects of Risk Tolerance and Financial Literacy to Investment Intentions. *International Journal of Innovation, Creativity and Change*, 10(6), 40–54.
- Soehartono, & Pati, U. K. (2019). The Regulation of Cryptocurrency Investation in Indonesia. *Advances in Social Science, Education and Humanities Research*, 358, 209–212.
- Soomro, B. A., Shah, N., & Abdelwahed, N. A. A. (2022). Intention to Adopt Cryptocurrency: A Robust Contribution of Trust and the Theory of Planned Behavior. *Journal of Economic and Administrative Sciences*, ahead-of-p(ahead-of-print), 1–9.
- Stix, H. (2019). *Ownership and Purchase Intention of Crypto-Assets – Survey Results* (No. 226; Working Paper, Issue 226).
- Sukumaran, S., Bee, T. S., & Wasiuzzaman, S. (2022). Cryptocurrency as an Investment: The Malaysian Context. *Risks*, 10(4), 2–17.
- Tavor, T., & Garyn-Tal, S. (2016). Risk Tolerance and Rationality in the Case of Retirement Savings. *Studies in Economics and Finance*, 33(4), 688–703.
- Wang, A. (2009). Interplay of Investors' Financial Knowledge and Risk Taking. *Journal of Behavioral Finance*, 10(4), 204–213.
- Zhao, H., & Zhang, L. (2021). Financial Literacy or Investment Experience: Which is More Influential in Cryptocurrency Investment? *International Journal of Bank Marketing*, 39(7), 1208–1226.
- Zulaihati, S., Susanti, S., & Widyastuti, U. (2020). Teachers' Financial Literacy: Does It Impact On Financial Behaviour? *Management Science Letters*, 10(3), 653–658.