The Effect of Financial Literacy, Risk Perception, Overconfidence, and Investment Experience on Cryptocurrency Investment Decision

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Abstract. An investment decision is a discretion adopted by investors in selecting or determining the placement of their investment funds. Investments are always fraught with uncertainty, as the investment occurs in the present while the benefits come in the future. Investment is essentially the deployment of capital now to gain profit in the future. This study aims to examine the effect of financial literacy, risk perception, and overconfidence on cryptocurrency investment decisions while taking investment experience as a moderating variable. The data used were primary data collected directly from 200 respondents. The sampling technique used was non-probability sampling with a purposive sampling technique. Respondents who completed questionnaires were examined quantitatively, and subsequently; SPSS was employed as an analytical tool. The results indicate that financial literacy and risk perception have a significant effect on cryptocurrency investment decisions. On the other hand, overconfidence has no significant effect on cryptocurrency investment decisions. In addition, investment experience has a positive and significant effect on investment decisions. Investment experience has a significant moderating effect between financial literacy and risk perception toward cryptocurrency investment decisions. However, investment experience has no significant effect as a moderating variable between overconfidence and cryptocurrency investment decisions.

Keywords: financial literacy · risk perception · overconfidence · investment experience · investment decision

1 Introduction

Financial investment has evolved dramatically over the last few decades, from simple investments in ordinary stocks, bonds, and mutual funds to more sophisticated financial derivatives such as forwards, options, and futures [1]. An investment choice is an activity or discretion made to generate a profit in the future [2].

Figure 1 illustrates the increased number of capital market and mutual fund investors in 2020, when the capital market and mutual fund investors reached 3,880,753 and
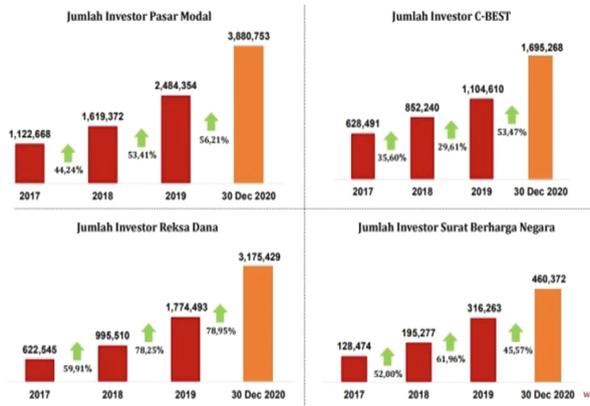
Fig. 1. Single Investor Identification Growth Rate [3].

3,175,429, respectively. Meanwhile, investors in cryptocurrencies are included in the C-BEST investors, which is ranked third with 1,695,268 investors. The increase in investment activity is undoubtedly tied to investors' decision-making. In decision-making theory, the concept of rational investors means that the chosen action is the one that produces the most significant predicted utility. However, research undertaken over the last few decades demonstrates that investors frequently behave irrationally and discover the capital and financial market occurrences that violate traditional financial theory.

According to financial theory, investors act rationally and take the information into account while making decisions [4]. Additionally, reasonable investors will undertake analysis in their decision-making process by examining the company's business performance.

The growth rate of cryptocurrency is considered extremely interesting from year to year. The development of the most valuable type of cryptocurrency today, bitcoin, is not limited to the international market. Suppose the non-IT community can already accept the technology and understand its implementation technique. In that case, it is inevitable that the development of cryptocurrency in Indonesia, particularly in Medan city, will accelerate significantly. Most cryptocurrency holders in Indonesia currently utilize their coins for investment, transaction, payment purposes, remittances, or international money transfers.

However, in addition to the Indonesian people's growing enthusiasm for cryptocurrency investment, some challenges could dampen cryptocurrency's popularity. One of the main challenges of cryptocurrency development in Indonesia is Bank Indonesia, which has refused to recognize and even blocked any transactions involving bitcoin, even though bitcoin is not an illegal payment instrument in the country.

Individuals and the economy suffer from a lack of financial literacy. Meanwhile, one of the criteria for making successful investment decisions is establishing a sound financial system that benefits investors. In this situation, financial literacy can contribute to establishing a sound financial system necessary for successful economic development.

According to Agustin and Imron [5], psychological factors influencing investors' decision-making include financial literacy, overconfidence, risk perception, and investment experience.

Financial literacy regarding the investments that investors have owned enables investors to make more confident investment decisions. According to Yulianti and Silvy [6], financial knowledge and experience influence investment decisions. However, Susdiani [7] found that financial literacy did not affect investment planning behavior.

When investors seek high returns, they must also embrace a high level of risk. On the other hand, investors will receive a low return if they seek low risk. Risk is an unwanted situation, a natural element of life that cannot always be avoided [8]. Each individual has a unique perspective on risk, and this perspective will influence an individual's investment decision-making. Yuyun and Pradikasari [9] claimed that risk perception has no effect on investment decision-making.

2 Research Methods

This study aims to evaluate the proposed hypothesis using research methodologies that were specifically designed for the variables being researched to obtain accurate results (Fig. 2).
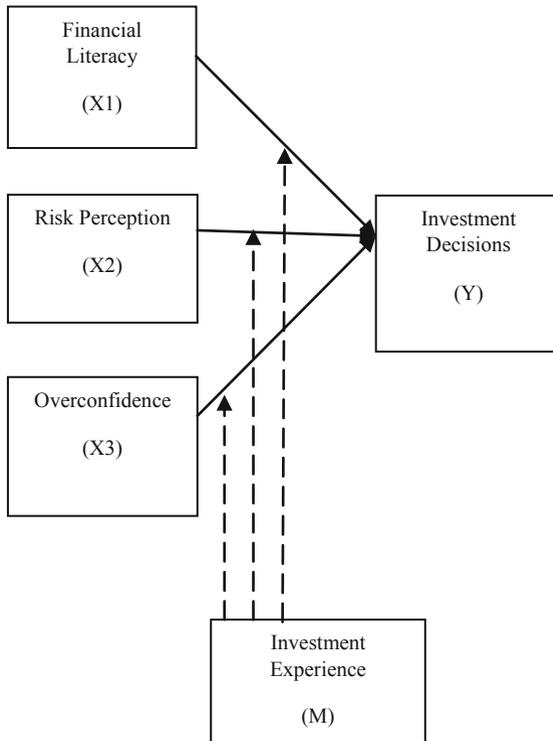

Fig. 2. Conceptual Framework

2.1 Measurement Scale

The interval scale was used in this study. The interval scale assigns a numerical value to the classification or category of items that possess ordinal size attributes and one additional feature, namely the same distance or interval, which is a characteristic of the object being measured [10].

2.2 Validity and Reliability Tests

Validity and reliability tests were conducted outside of the research sample. Both tests were conducted on people who invested in cryptocurrency in Medan.

2.3 Multiple Linear Regression

Multiple regression analysis was used to determine whether or not a hypothesis was accepted or rejected [11].

3 Results and Discussion

Table 1 are the results of multiple linear regression analysis.
As shown in Eq. (1), multiple linear regression is determined based on Table 1.

$$Y = 27.101 + 1.721X_1 + 0.513X_2 + 0.514X_3 + 0.868Z + 0.997Z_{X_1} - 0.540X_2 - 0.980X_3 \tag{1}$$

The multiple linear regression equation has the following interpretation. The financial literacy variable has a positive coefficient of 1.721 with a t count of $5.115 > 1.9723$

Table 1. Multiple Linear Regression Results

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	27.101	0.382		71.029	0
	Zscore: X1	1.721	0.336	0.425	5.115	0
	Zscore: X2	0.513	0.394	0.127	1.301	0.195
	Zscore: X3	0.514	0.338	0.127	1.522	0.13
	Zscore: Z	0.868	0.281	0.215	3.096	0.002
	Z_X1	0.997	0.376	0.201	2.649	0.009
	Z_X2	−0.54	0.377	−0.136	−1.432	0.154
	Z_X3	−0.98	0.346	−0.244	−2.833	0.005

Source: Results of Data Processing using SPSS

and a significance level of $0.00 < 0.05$. This demonstrates that financial literacy has a significant positive effect on investment. The risk perception variable has a positive coefficient of 0.513 with a t value of $1.301 < 1.9723$ and a significance level of $0.195 > 0.05$. This shows that risk perception has a small but positive effect on investment decisions. The overconfidence variable has a positive coefficient of 0.514 with a t count of $1.522 < 1.9723$ and a significance level of $0.130 > 0.05$. This demonstrates that overconfidence has a positive but insignificant effect on investment decisions. The investment experience variable has a positive coefficient value of 0.868, with a t value of $3.096 > 1.9723$, and a significance level of $0.002 < 0.05$. This demonstrates that investment experience has a significant positive effect on investment. Based on the results of statistical tests with an absolute difference, it is known that the investment experience variable has a positive coefficient value of 0.997, with a t count of $2.649 > 1.9723$ and a significance level of $0.009 > 0. 0.05$. Based on the results of statistical tests with an absolute difference, the coefficient value of the investment experience variable is -0.540, which is negative with a t count of $-1.432 < 1.9723$ and a significance level of $0.154 > 0.05$. Based on the results of statistical tests with an absolute difference, the investment experience variable's coefficient value is -0.980, which is negative with a t count of $-2.833 < 1.9723$ and a significance level of $0.005 < 0.05$.

The following are the findings of hypothesis testing in this study:

As illustrated in Table 2, financial literacy, risk perception, overconfidence, and investment experience have an effect on investment decisions. Tests of significance were performed in conjunction with decision-making criteria as follows:

H0 is accepted, if Sig. t $\geq \alpha$.
Ha is accepted, if Sig. t $\leq \alpha$.

Table 2. Partial Test

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	27.101	0.382		71.029	0
	Zscore: X1	1.721	0.336	0.425	5.115	0
	Zscore: X2	0.513	0.394	0.127	1.301	0.195
	Zscore: X3	0.514	0.338	0.127	1.522	0.13
	Zscore: Z	0.868	0.281	0.215	3.096	0.002
	Z_X1	0.997	0.376	0.201	2.649	0.009
	Z_X2	-0.54	0.377	-0.136	-1.432	0.154
	Z_X3	-0.98	0.346	-0.244	-2.833	0.005

[a] Dependent Variable: Y

1 Effect of Financial Literacy on Investment Decisions
   Based on the results, the data indicate that $0.000 < 0.05$, then H0 is rejected, suggesting that financial literacy has a partial effect on investment decisions. This shows that higher financial literacy will result in a significant increase in investment decisions.

2 Effect of Risk Perception on Investment Decisions
   Because the results indicate that $0.195 > 0.05$, H0 is accepted, implying that, partially, risk perception has an insignificant effect on investment decisions. This suggests that if risk perception increases, the investment decision does not statistically increase.

3 Effect of Overconfidence on Investment Decisions
   The results show that $0.130 > 0.05$, then H0 is accepted, demonstrating that partially, overconfidence has no significant effect on investment decisions. This means that as overconfidence increases, investment decisions do not statistically increase.

4 Effect of Investment Experience on Investment Decisions
   The results indicate that $0.002 < 0.05$, then H0 is rejected, indicating that investment experience has a partially significant effect on investment decisions. This suggests that increasing investment experience capability will result in a significant increase in the investment decision.

5 Effect of Financial Literacy on Investment Decisions with Investment Experience as Moderating Variable
   The results indicate that $0.009 < 0.05$, then H0 is rejected, indicating that investment experience can help moderate financial literacy and has a partial effect on investment decisions.

6 Effect of Risk Perception on Investment Decisions with Investment Experience as Moderating Variable
   The results show that $0.154 > 0.05$, then H0 is accepted, indicating that investment experience does not moderate risk perception and has no significant effect on investment decisions.

7 Effect of Overconfidence on Investment Decisions with Investment Experience as Moderating Variable
   The results indicate that $0.005 < 0.05$, then H0 is rejected, implying that investment experience moderates overconfidence and has a partial effect on investment decisions.

4 Conclusion

Because the results indicate that financial literacy has an effect on cryptocurrency investment decisions, it is hoped that investors will be able to improve their financial attitudes in order to adopt a more prudent and responsible perspective when making financial decisions, thereby improving their ability to make good and correct decisions.

Because the results indicate that the risk perception variable has an effect on cryptocurrency investment decisions, it is hoped that investors would have a better understanding of their own emotions and cognitive errors when making an investment decision. When someone has a high-risk perception, he or she typically takes a strong stance because the perception is based on available investment information.

Because the study's findings indicate that investment experience has an effect on cryptocurrency investment decisions, it is hoped that cryptocurrency investors would

be able to maintain and improve certain aspects of their investment experience while making investment decisions.

The study's findings indicate that while overconfidence cannot moderate the relationship between the independent and dependent variables, investment experience can act as an exogenous variable, allowing future research to include investment experience as an independent variable.

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