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THE INFLUENCE OF OVERCONFIDENCE, RISK TOLERANCE, AND HERDING BEHAVIOR ON CRYPTOCURRENCY INVESTMENT DECISIONS AMONG STUDENTS IN SURABAYA

Nelsha Fariska Hermawanti [1], Tituk Diah Widajayantie [2]

[1,2] Faculty of Economic and Business, UPN Veteran Jawa Timur, Surabaya, Indonesia

**email: [1] 2101301042@student.upnjatim.ac.id; [2] tituk.widajayantie.ak@upnjatim.ac.id*

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ABSTRACT

The phenomenon of increasing interest in digital asset investment among university students is often not accompanied by adequate financial literacy, leading to investments being made based on trends or social influence without careful risk consideration. In light of this, the present study aims to analyze the influence of overconfidence, risk tolerance, and herding behavior on cryptocurrency investment decisions among university students in Surabaya. This study employs a quantitative approach, using a probability sampling technique with a total of 98 respondents. The type of data used in this research is primary data. Data analysis was conducted using Partial Least Squares (PLS) with the SmartPLS software. The results indicate that overconfidence, risk tolerance, and herding behavior have a positive and significant effect on cryptocurrency investment decisions. These findings support behavioral finance theory, which asserts that psychological and social factors influence investment decisions. This study is expected to contribute to the improvement of financial literacy among students and serve as a consideration for novice investors in making more informed investment decisions.

1. Introduction

The advancement of technology in the modern industrial era has brought significant changes in various aspects of Indonesian society, including in the fields of finance and investment. The ease of access to digital financial services has encouraged public participation especially among the younger generation in various investment instruments [1]. One form of investment currently trending among university students is **cryptocurrency**, a digital asset based on **blockchain technology** that offers ease of transactions, high profit potential, and better liquidity compared to conventional investment instruments [2]

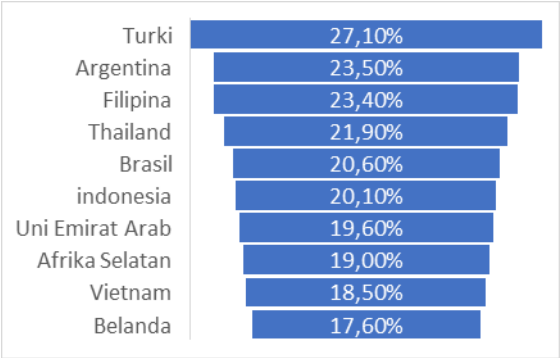

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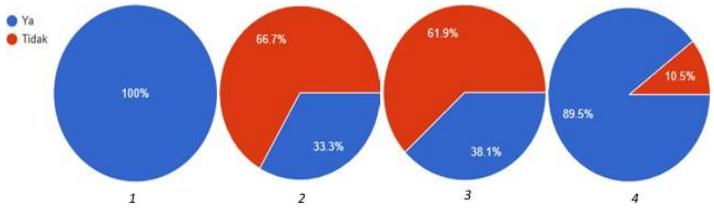
Figure 1 List of Countries with the Highest Cryptocurrency Users in the World

Data from the Commodity Futures Trading Regulatory Agency (BAPPEBTI) shows that Indonesia ranked sixth globally in terms of cryptocurrency ownership in 2023, with a dominant share of investors coming from younger age groups, including university students. The Financial Services Authority (OJK) also recorded a significant increase in the number of crypto asset investors in Indonesia, with students and university learners being one of the largest investor groups. This phenomenon is driven by the ease of access to information, the influence of social media, and the growing trend of digitalization in academic environments, particularly in major cities such as Surabaya [3].



Source: Danurwenda & Suhartini (2024)

Figure 2 List of Countries with the Highest Cryptocurrency Users in the World

However, the high interest in investment among university students is not always accompanied by adequate financial literacy [4]. The results of the pre-research survey indicate that most students invest because they follow trends or peer suggestions, without careful risk consideration and sufficient understanding of the fluctuations in digital asset values. The **FOMO (Fear of Missing Out)** phenomenon and the influence of social media influencers further reinforce students' tendency to make impulsive investment decisions [5]. This condition poses a significant risk of financial loss, especially given the extreme price volatility of cryptocurrencies [6]. In the context of investment behavior, individual decisions are influenced not only by rational analysis but also by psychological and social factors. Three key factors frequently examined in behavioral finance theory are **overconfidence**, **risk tolerance**, and **herding behavior** [7].

Overconfidence describes a situation where investors are overly confident in their abilities, leading them to overlook potential high risks. They believe they are superior in predicting securities movements compared to other investors, which ultimately leads them not to diversify their portfolios [8]. Research by Pranata (2023) shows that overconfidence bias has a positive effect on investment decisions in cryptocurrency. This finding indicates that investors feel confident in their insights and skills in selecting crypto assets and believe that the decisions made will bring the expected results. However, Perayunda & Mahyuni (2022) showed different results, concluding that overconfidence does not have a significant influence on investment decisions in crypto assets. This ineffectiveness is because investors tend to ignore the views or experiences of more expert parties when dealing with high-risk investment instruments such as cryptocurrency.

Risk tolerance refers to an individual's ability to face risk when making investment decisions. Each investor has a different level of risk tolerance, making it important for them to make appropriate

decisions to achieve their desired investment goals [7]. In previous research, Perayunda & Mahyuni (2022) found that investment decisions in cryptocurrency are greatly influenced by the level of risk tolerance. This is because investors tend to quickly absorb information from their surroundings, which encourages them to actively seek new knowledge related to investments, while also helping them understand and accept the risks inherent in investing. However, different results were obtained by Febrianti & Bakhtiar (2024), who showed that risk tolerance does not have a significant effect on investment decisions in cryptocurrency. Generally, investors with high risk tolerance tend to choose bolder investment options. They are more likely to take high-risk investments, especially those involving real assets, if their risk tolerance is indeed high.

Herding behavior is the tendency of investors to imitate the investment decisions made by others, such as the influence of peers or the surrounding environment [9]. In Pranata's (2023) study, it was found that herding behavior has a positive and significant effect on investment decisions in cryptocurrency. Investors often follow others' decisions without conducting objective analysis or evaluation, which can lead to irrational investment decisions. However, research by Kalimasada & Rohim (2023) showed different results, where herding behavior did not have a significant impact on investment decisions made by millennial cryptocurrency investors in Malang. This finding indicates that investors tend to rely more on their own analysis rather than simply following the decisions of others or peers.

Based on the previous explanations, the results show varied findings regarding the influence of these three factors on cryptocurrency investment decisions. Some studies have found that overconfidence, risk tolerance, and herding behavior have shown inconsistent effects on cryptocurrency investment decision-making. The uncertainty of these research results indicates the need for further study, especially among student groups in major cities like Surabaya. Based on the explained context and existing phenomena, as well as the differences in research findings, the researcher intends to conduct a study titled "The Influence of Overconfidence, Risk Tolerance, and Herding Behavior on Cryptocurrency Investment Decisions Among Students in Surabaya."

2. Literature Review

2.1 Behavioral Finance Theory

Behavioral finance theory was first developed by Robert J. Shiller and Richard H. Thaler in 1991. Behavioral finance is a field of study that examines how psychology influences the financial behavior of its participants. Many reactions in financial markets appear to contradict conventional financial theory, and this field provides important contributions in helping investors avoid serious mistakes when deciding on the right investment strategies [10].

Behavioral finance theory implies that a person's actions are influenced by their psychological conditions; moreover, these actions are not always based on rational attitudes but also involve irrational behavior [7]. The theory of behavioral finance seeks to demonstrate that investors' mindset in making investment decisions is an important factor to consider, given that investors are inevitably influenced by psychological and emotional aspects [11].

Behavioral finance theory is closely related to overconfidence, risk tolerance, and herding behavior in investment decisions. Overconfidence causes investors to be overly confident in predicting volatile markets, while risk tolerance determines the extent to which they are willing to face price fluctuation risks[12]. Herding behavior reflects the tendency to follow the majority without in-depth analysis, which often occurs in speculation-based markets[13]. Understanding these three variables through behavioral finance theory provides important insights into the factors that influence cryptocurrency investment decisions.

2.2 Overconfidence

Overconfidence is an excessive confidence attitude, based on instincts, self-assessment, and exaggerated cognitive abilities [14]. Overconfidence can be defined as the behavior exhibited by investors when they feel confident in their abilities and knowledge, while tending to underestimate available public information [15]. As a result, they often ignore the high risks that may be encountered, which can certainly cause psychological pressure when their investments fail.

Overconfidence is often experienced by novice investors who desire to quickly obtain high returns by relying on their own abilities [16]. Anggirani (2019) explains that there are several factors that form overconfidence, namely:

1. Belief in the profits gained from the investments made.
2. Confidence that their investing ability is superior compared to other investors.
3. Belief that their investment knowledge is better than that of other investors.

2.3 Risk tolerance

Risk tolerance refers to the extent to which an investor is willing to take risks in investment. This helps investors to calmly accept and manage risks, thereby assisting them in choosing the right investment objects [15]. The level of risk tolerance varies due to several factors, including age, social and economic status, wealth, income, and career status (Ningrum et al., 2023).

Whenever an investor chooses to invest, they will strive to minimize all potential risks, both short-term and long-term [4]. Tandelein (2017, pp. 4) explains that there are several levels of investor risk tolerance, namely:

1. **Risk Seeker**: An investor who tends to choose to invest in high-risk assets and behaves aggressively and speculatively in making investment decisions because they understand the positive relationship between returns and risks.
2. **Risk Neutral**: An investor who is neutral, meaning they tend to choose assets with balanced potential returns and risks and are very cautious in making investments.
3. **Risk Averse** refers to an investor who decides to avoid or limit risk. They tend to seek safe investments with low risk and stable returns.

2.4 Herding Behavior

Herding is the behavior of individuals who tend to imitate the actions of others [9]. Herding behavior is defined as the tendency of an investor to follow the investment choices made by other investors without first conducting their own analysis, including fundamental analysis or strategy [16].

Herding behavior can occur due to phenomena influencing investors, caused by their desire to imitate the actions of other investors in order to gain similar rewards [17]. Hanum Pertiwi & Panuntun (2023) mention several factors that drive herding behavior, namely:

1. **FOMO (Fear of Missing Out):** Investors tend to fear missing out on opportunities if they do not follow market trends, even though they do not fully understand the conditions.
2. **Bad Experience:** Investors who have previously experienced losses may be more likely to imitate others' decisions as an effort to avoid making the same mistakes in the future.

2.5 Investment Decision

Investment is the act of allocating a certain amount of money at present with the expectation of obtaining returns in the future [18]. Investment decision is the action taken by an individual to save a portion of their income with the hope of gaining profit from the increase in asset value, which is generally done in the long term [19].

When making investment decisions, investors are influenced by two attitudes: rational and irrational. A person with a rational attitude bases their beliefs on common sense, while a person with an irrational attitude bases their beliefs on psychological and demographic factors [20]. The purpose of investment decision-making is to determine goals, gather data, and weigh different investment possibilities. Tandelilin (2017) mentions several factors that form the basis for someone in making investment decisions:

1. **Return:** The main factor that motivates someone to invest.

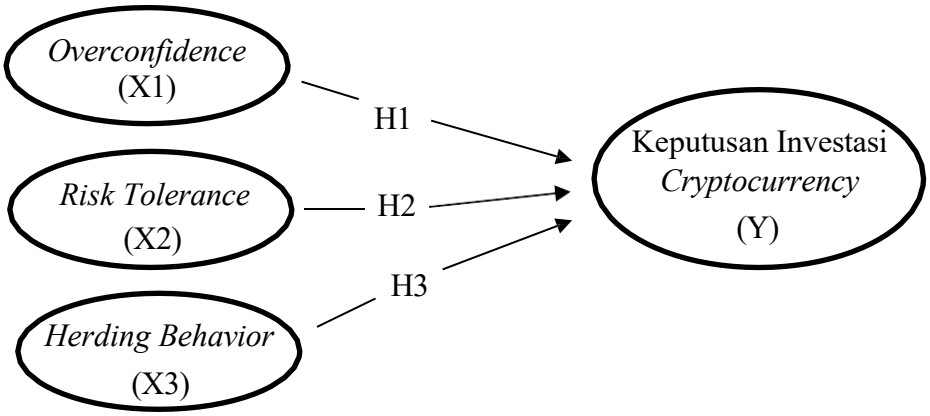
2. **Risk:** The higher the expected return from an investment, the greater the risk.
3. **The relationship between return and risk:** It is expected that the relationship between the level of risk and the level of return is linear or aligned.

2.6 Hypothesis

H1: Overconfidence has a positive effect on Investment Decisions

H2: Risk Tolerance has a positive effect on Cryptocurrency Investment Decisions

H3: Herding Behavior has a positive effect on Cryptocurrency Investment Decisions



Source: Processed Primary Data, 2025

Figure 3. Frame of Mind

3. Method

The research method used in this study is a quantitative research method. The objects of this study are overconfidence, risk tolerance, and herding behavior as independent variables (X), and investment decisions as the dependent variable (Y). The subjects or respondents in this study are undergraduate students in Surabaya. The sampling technique used is probability sampling with a simple random sampling method. The researcher used Slovin's formula to determine the sample size from the population, resulting in a sample of 98 respondents. The type of data used in this study is primary data. Data collection was conducted using a questionnaire method, which was distributed online through an accounting student group. The data analysis technique applied in this study is the Partial Least Square (PLS) method. Data processing was performed using Smart-PLS 4 software.

4. Results and Discussion

The data analysis results in this study include testing the measurement model (outer model), the structural model (inner model), and hypothesis testing, which will be explained as follows:

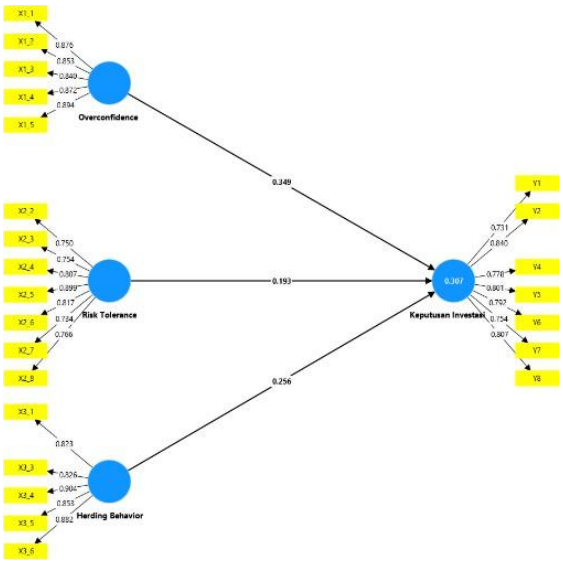
OUTER MODEL It aims to test validity through convergent and discriminant validity, as well as measure reliability using composite reliability and Cronbach's alpha.

A) Convergent validity is tested on each construct indicator. According to Chin (2015), an indicator is considered valid if its value is above 0.70, while values between 0.50 and 0.60 are still acceptable. Indicators with a loading factor below 0.50 will be removed from the model

Source: Processed Primary Data, 2019

Figure 4 Initial Results of the SmartPLS 4.0 Algorithm

Based on the results of the item validity analysis in Figure 4, four items, namely X1.6, X2.1, X3.2, and Y.3, were found not to meet the validity criteria because their outer loading factor values were below 0.5. Therefore, these four items will be eliminated and will not be included in the subsequent analysis as they are considered unable to represent the variables being measured. To ensure that the instrument used is truly valid, a retest was conducted on the remaining items with the following results:



Source: Processed Primary Data, 2019

Figure 5 Results of the SmartPLS 4.0 Algorithm After Elimination

After the elimination process, it can be seen that all indicators of the research variables are declared valid, as the Outer Loadings values of each indicator are greater than 0.7. Therefore, the questionnaire items can be used in the subsequent analyses.

B) Discriminant Validity is the assessment of the cross-loading factor, which is carried out by comparing the value of each indicator on its respective variable, where the indicator is considered valid if it has the highest value compared to its values on other variables.

Based on Table 1, it shows that each indicator has a cross-loading factor value greater than the cross-loading factors of other variables. This indicates that the indicators used in this

study have met the criteria for discriminant validity. These indicators are considered valid and suitable for use in research analysis because they can clearly distinguish constructs between variables and there is no overlap in their measurement.

Table 1 Diskriminant Validity

Item	Overconfidence (X1)	Risk Tolerance (X2)	Herding Behavior (X3)	Keputusan Investasi
X1.1	**0,876**	0,073	0,177	0,358
X1.2	**0,853**	0,059	0,160	0,326
X1.3	**0,840**	0,130	0,090	0,318
X1.4	**0,872**	0,067	0,073	0,378
X1.5	**0,894**	0,083	0,114	0,362
X2.2	0,056	**0,750**	0,324	0,186
X2.3	0,048	**0,754**	0,310	0,138
X2.4	0,121	**0,807**	0,472	0,179
X2.5	0,135	**0,899**	0,445	0,255
X2.6	0,235	**0,817**	0,462	0,328
X2.7	-0,017	**0,734**	0,178	0,256
X2.8	-0,048	**0,766**	0,304	0,374
X3.1	0,164	0,434	**0,823**	0,412
X3.3	0,013	0,331	**0,826**	0,171
X3.4	0,166	0,422	**0,904**	0,361
X3.5	0,076	0,348	**0,853**	0,354
X3.6	0,123	0,353	**0,882**	0,274
Y1	0,257	0,316	0,415	**0,731**
Y2	0,379	0,281	0,380	**0,840**
Y4	0,340	0,298	0,295	**0,778**
Y5	0,399	0,331	0,286	**0,801**
Y6	0,323	0,226	0,219	**0,792**
Y7	0,257	0,198	0,184	**0,754**
Y8	0,210	0,167	0,326	**0,807**

Source: Processed Primary Data, 2025

Discriminant validity can also be assessed by comparing the square root of the Average Variance Extracted (AVE) for each construct with the correlations between other constructs in the model. The AVE value should ideally be greater than 0.50 or have a p-value smaller than the 5% significance level (Paramita et al., 2021).

Based on Table 2 regarding the *Average Variance Extracted* (AVE), all variables have met the discriminant validity criteria with values above 0.50. From these results, it can be concluded that all variables are valid and reliable. After the variables are declared valid, the next step is to conduct reliability testing on all variables used in this study.

Table 2 ***Average Variance Extracted*** **(AVE)**

Variabel	AVE
Overconfidence (X1)	0.752
Risk Tolerance (X2)	0.626
Herding Behavior (X3)	0.737
Keputusan Investasi (Y)	0.619

Source: Processed Primary Data, 2025

C) Reliability testing is conducted at the final stage of the outer model testing as a tool to measure the consistency of the variable indicators in the questionnaire. Reliability measurement can be done using two methods, namely composite reliability and Cronbach's alpha. Both values must reach a minimum of 0.7 to be considered reliable.

Based on the table, the constructs of variables X1, X2, X3, and Y are declared reliable because their composite reliability and Cronbach's alpha values each exceed 0.7. Therefore, it can be concluded that all variables in this study have a good level of reliability.

Table 3 Uji Composite Reliability dan Cronbach's Alpha

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)
Overconfidence (X1)	0,918	0,921	0,938
Risk Tolerance (X2)	0,902	0,932	0,921
Herding Behavior (X3)	0,913	0,937	0,933
Keputusan Investasi (Y)	0,898	0,906	0,919

Source: Processed Primary Data, 2025

INNER MODEL The structural model test (inner model) aims to analyze the relationships between variables. The inner model testing process can be carried out through the following steps:

A) The R-Square (R^2) value is used to assess the model's goodness of fit by measuring the proportion of variance in the dependent variable explained by the independent variables. It indicates how well the model explains the data.

The R-Square (R^2) value measures how much the independent variables explain the variance in the dependent variable. Based on Table 5, the R^2 for Investment Decision is 0.307, meaning the predictor variables explain 30.7% of the variation in investment decisions, while 69.3% is influenced by other factors. The Adjusted R-Square value of 0.285 provides a more accurate estimate by accounting for the number of variables.

Table 4 Uji Nilai R-Square (R^2)

Variabel	**R Square**	**R Square Adjusted**
Keputusan Investasi (Y)	0,307	0,285

Source: Processed Primary Data, 2025

UJI HIPOTESIS

Hypothesis testing is done by looking at the p-value and t-statistic, with the following criteria:

- The hypothesis is accepted if the t-statistic > 1.96 and the p-value < 0.05.
- The hypothesis is rejected if the t-statistic < 1.96 and the p-value > 0.05.

Table 5 Uji Hipotesis

	Original Sample	Sample Mean	Standard Deviation	T Statistics	P Values
Overconfidence -> Keputusan Investasi	0,349	0,351	0,113	3,098	0,002
Risk Tolerance -> Keputusan Investasi	0,193	0,216	0,095	2,028	0,043
Herding Behavior -> Keputusan Investasi	0,256	0,266	0,123	2,079	0,038

Source: Processed Primary Data, 2025

Here are the hypothesis test results for the structural model:

- Effect of Herding Behavior: Herding behavior has a positive and significant effect on investment decisions, with a coefficient of 0.256, a t-statistic of 2.079, and a p-value of 0.038. This indicates that the tendency to follow the group influences investment decisions.
- Effect of Overconfidence: Overconfidence has the strongest positive and significant effect on investment decisions, with a coefficient of 0.349, a t-statistic of 3.098, and a p-value of 0.002, showing that excessive confidence significantly affects investment decisions.
- Effect of Risk Tolerance: Risk tolerance also has a positive and significant effect, with a coefficient of 0.193, a t-statistic of 2.028, and a p-value of 0.043, indicating that risk tolerance statistically influences investment decisions.

Discussion

The findings of this study reveal that overconfidence, risk tolerance, and herding behavior each have varying degrees of influence on students' decisions to invest in cryptocurrency in Surabaya. The results indicate that overconfidence has a significant positive effect on investment decisions, aligning with the findings of Pranata (2023), who noted that investors with higher confidence in their knowledge and skills are more likely to make bold investment choices in cryptocurrency. This suggests that students who perceive themselves as well-informed about crypto assets tend to disregard potential risks, leading to riskier investment behaviors. However, this result contrasts with Perayunda and Mahyuni (2022), who found that overconfidence did not significantly affect crypto investment decisions, attributing the difference to investors' tendency to ignore advice from more experienced peers. The divergence in findings may be due to differences in sample characteristics and the rapidly evolving nature of cryptocurrency markets, which can influence investor psychology.

Regarding risk tolerance, this study finds that students with higher risk tolerance are more inclined to invest in cryptocurrencies, supporting the argument by Fridana and Asandimitra (2020) and Perayunda and Mahyuni (2022) that risk tolerance is a key determinant in investment decision-making. These results suggest that students who are more accepting of potential losses are more likely to participate in high-volatility markets like cryptocurrency. Conversely, Febrianti and Bakhtiar (2024) reported that risk tolerance did not significantly influence investment decisions in crypto, highlighting that even risk-tolerant investors may hesitate to enter highly speculative markets due to the lack of regulatory clarity or personal financial constraints. This inconsistency suggests that risk tolerance alone may not be sufficient to drive investment decisions without adequate financial literacy and market understanding.

The analysis of herding behavior shows a significant positive effect on investment decisions, in line with Pranata (2023), who found that investors often follow the crowd, especially in the context of trending assets like cryptocurrency. The prevalence of social media influencers and peer recommendations amplifies this effect, as observed by Aritonang and Hariwibowo (2024), who noted the role of FOMO (Fear of Missing Out) in driving investment behavior among young adults. However,

Kalimasada and Rohim (2023) found that herding behavior did not significantly affect investment decisions among millennial investors in Malang, suggesting that some investors may prioritize personal analysis over social influence. This difference could be attributed to varying levels of financial education and access to reliable information, which can mitigate the impact of herding.

Overall, the results of this study contribute to the growing body of literature on behavioral finance by highlighting the importance of psychological and social factors in shaping investment decisions in emerging markets like cryptocurrency. The inconsistencies between this study and previous research underscore the need for further investigation into the contextual and individual factors that mediate these relationships. The findings also emphasize the importance of financial education and awareness programs to help students make informed investment decisions and avoid the pitfalls of overconfidence and herding.

5. Conclusions

This study demonstrates that overconfidence, risk tolerance, and herding behavior positively and significantly influence cryptocurrency investment decisions among students in Surabaya. The findings indicate that psychological and social factors play an important role in investment decision-making, alongside rational considerations. Overconfidence is the most dominant factor, followed by herding behavior and risk tolerance. These results suggest that students tend to be overly confident, easily influenced by their environment, and possess a certain level of risk tolerance when choosing digital asset investments.

The implication of this research is the need to enhance financial literacy and risk understanding among students so that investment decisions can be made more wisely and prudently. Knowledge of psychological and social influences is expected to help students and novice investors be more cautious when making investment decisions, especially in highly volatile markets such as cryptocurrency.

6. References

[1] R. Wirawan, T. Mildawati, and B. Suryono, "Determinan Pengambilan Keputusan Investasi Berdasarkan Norma Subjektif, Kontrol Perilaku, Dan Perilaku Heuristik," *EKUITAS (Jurnal Ekon. dan Keuangan)*, vol. 6, no. 1, pp. 43–57, 2022, doi: 10.24034/j25485024.y2022.v6.i1.5163.

[2] E. Nursalimah, I. Utami, and M. Panorama, "Pengaruh Regret Aversion Bias dan Overconfidence terhadap Pengambilan Keputusan Investasi Cryptocurrency," *J. Manaj. Bisnis dan Keuang.*, vol. 3, no. 2, pp. 47–55, 2022, doi: 10.51805/jmbk.v3i2.59.

[3] P. Gerrans, S. B. Abisekaraj, and Z. (Frank) Liu, "The fear of missing out on cryptocurrency and stock investments: Direct and indirect effects of financial literacy and risk tolerance," *J. Financ. Lit. Wellbeing*, vol. 1, no. 1, pp. 103–137, 2023, doi: 10.1017/flw.2023.6.

[4] R. Danurwenda and D. Suhartini, "Jurnal E-Bis : Ekonomi-Bisnis," *J. E-Bis Ekon.*, vol. 8, no. 2, pp. 573–583, 2024.

[5] D. E. Aritonang and I. N. Hariwibowo, "Fenomena ' FoMO ' Investasi Cryptocurrency : Analisis Sentimen," vol. 4, no. 2, pp. 1–12, 2024.

[6] I. R. K. Ahmad Dhani Putra Pratama, Adam Akbar, Muhammad Farhan, Rusdi Hidayat, "Penerapan Teori Prospek dalam Pengambilan Keputusan Investasi Saham," *J. Ekon. Akuntansi, Manaj.*, vol. 2, no. 2, pp. 476–486, 2024.

[7] I. O. Fridana and N. Asandimitra, "Analisis Faktor Yang Memengaruhi Keputusan Investasi (Studi Pada Mahasiswi Di Surabaya)," *J. Muara Ilmu Ekon. dan Bisnis*, vol. 4, no. 2, p. 396, 2020, doi: 10.24912/jmieb.v4i2.8729.

[8] R. Khalid, M. Javed, and K. Shahzad, "Impact of Behavioral Biases on Investment Decision Making with Moderating Role of Financial Literacy," *Jinnah Bus. Rev.*, vol. 6, no. 2, pp. 34–41, 2018, doi: 10.53369/rkxa7855.

[9] D. Afriani and H. Halmawati, "Pengaruh Cognitive Dissonance Bias, Overconfidence Bias Dan Herding Bias Terhadap Pengambilan Keputusan Investasi," *J. Eksplor. Akunt.*, vol. 1, no. 4, pp. 1650–1665, 2019, doi: 10.24036/jea.v1i4.168.

[10] Permada N.R dewi, *Literature Review About Behavioral Finance Theory*. 2021.
[11] B. S. Nurbarani and G. Soepriyanto, "Determinants of Investment Decision in Cryptocurrency: Evidence from Indonesian Investors," *Univers. J. Account. Financ.*, vol. 10, no. 1, pp. 254–266, 2022, doi: 10.13189/ujaf.2022.100126.
[12] J. Justyanita and I. N. Agustin, "Analisis Dampak Perilaku Keuangan Terhadap Keputusan Investasi Cryptocurrencies pada Generasi Milenial di Indonesia," *EKOMABIS J. Ekon. Manaj. Bisnis*, vol. 4, no. 02, pp. 197–214, 2024, doi: 10.37366/ekomabis.v4i02.377.
[13] H. Rahyuda and M. R. Candradewi, "Determinants of cryptocurrency investment decisions (Study of students in Bali)," *Invest. Manag. Financ. Innov.*, vol. 20, no. 2, pp. 193–204, 2023, doi: 10.21511/imfi.20(2).2023.17.
[14] N. S. Nur Aini and L. Lutfi, "The influence of risk perception, risk tolerance, overconfidence, and loss aversion towards investment decision making," *J. Econ. Business, Account. Ventur.*, vol. 21, no. 3, pp. 401–413, 2019, doi: 10.14414/jebav.v21i3.1663.
[15] I. G. A. D. Perayunda and L. P. Mahyuni, "Faktor-Faktor Yang Mempengaruhi Keputusan Investasi Cryptocurrency Pada Kaum Milenial," *EKUITAS (Jurnal Ekon. dan Keuangan)*, vol. 6, no. 3, pp. 351–372, 2022, doi: 10.24034/j25485024.y2022.v6.i3.5224.
[16] T. D. Theressa and R. F. Armansyah, "Pengaruh herding, overconfidence, dan endowment bias pada keputusan investasi investor pasar modal," *J. Bus. Bank.*, vol. 12, no. 1, p. 35, 2022, doi: 10.14414/jbb.v12i1.2989.
[17] Y. C. Setiawan, A. D. R. Atahau, and R. Robiyanto, "Cognitive Dissonance Bias, Overconfidence Bias dan Herding Bias dalam Pengambilan Keputusan Investasi Saham," *AFRE (Accounting Financ. Rev.*, vol. 1, no. 1, pp. 17–25, 2020, doi: 10.26905/afr.v1i1.1745.
[18] I. M. Adnyana, *Manajemen Investasi dan Protofolio*. 2020. [Online]. Available: Lembaga Penerbitan Universitas Nasional (LPU-UNAS)
[19] V. Novianggie and N. Asandimitra, "The Influence of Behavioral Bias, Cognitive Bias, and Emotional Bias on Investment Decision for College Students with Financial Literacy as the Moderating Variable," *Int. J. Acad. Res. Accounting, Financ. Manag. Sci.*, vol. 9, no. 2, pp. 92–107, 2019, doi: 10.6007/IJARAFMS/v9-i2/6044.
[20] I. P. S. Putra, H. Ananingtiyas, D. R. Sari, A. S. Dewi, and M. Silvy, "Experienced Regret , dan Risk Tolerance pada Pemilihan Jenis Investasi," *J. Bus. Bank.*, vol. 5, no. 2, pp. 271–282, 2020, doi: 10.14414/jbb.v5i2.548.