

## ***The Influence of Herding Behavior on Cryptocurrency Investment Decision Among Investors in Bandung Raya Area***

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**Abstract:** *This study explores how herding behavior influences cryptocurrency investment decisions among investors in Bandung Raya area. The study is driven by the growing involvement in digital asset markets and the psychological biases influencing investor actions. Using a quantitative method, data were collected from 157 purposively selected respondents through questionnaires and analyzed with IBM SPSS Statistics 27. The analysis included validity and reliability testing, descriptive statistics, classical assumption tests, correlation test and simple linear regression to assess the impact of herding behavior. The results reveal a significant and positive relationship between herding behavior and investment decisions, evidenced by a strong correlation coefficient of 0.863. Investors tend to follow the actions of others and market trends without conducting independent evaluations. This reflects a strong psychological inclination toward social conformity, particularly in high-volatility environments like the cryptocurrency market. The findings suggest that behavioral factors substantially shape investment choices, often outweighing rational decision-making. In conclusion, herding behavior emerges as a key factor in cryptocurrency investment decisions, highlighting the dominance of group influence. The study recommends enhancing financial literacy and behavioral finance education to foster better-informed investment practices.*

**Keywords:** *herding behavior; investment decision; cryptocurrency; bandung*

### **INTRODUCTION**

Over the past two decades, rapid advancements in digital technology have significantly transformed various aspects of human life, including global financial and investment systems. One of the most notable innovations to emerge is cryptocurrency, which serves both as a digital currency and an investment asset. Cryptocurrency refers to a form of digital asset that employs cryptographic encryption and blockchain technology to establish a secure, transparent, and decentralized financial system (Nakamoto, 2008). It facilitates peer-to-peer transactions without the need for traditional financial intermediaries such as banks, offering increased efficiency and security (Pernice & Scott, 2021). In Indonesia, enthusiasm for cryptocurrency investment has grown rapidly. As illustrated in Figure 1, the number of cryptocurrency investors in the country has significantly increased in recent years. According to data from the Ministry of Trade of the Republic of Indonesia (2024), the number of cryptocurrency investors has surpassed 21 million,

with transaction values exceeding IDR 426 trillion as of September 2024.



Figure 1. Number of Cryptocurrency Investors in Indonesia

Source: Coinvestasi, 2022

Investor enthusiasm appears to be particularly high in the provinces of Java. A report by Cryptoo.id (2024) notes that Java accounts for 63.6% of the total number of cryptocurrency investors in the country. Bandung Raya, a metropolitan area in West Java Province, is among the regions with a high adoption rate of cryptocurrency. Data from CoinFolks (2022) even ranks Bandung among the Top 50 Crypto Hub Cities of 2022, indicating a strong level of public readiness to adopt and adapt to cryptocurrency technologies. However, the rapid increase in the number of investors does not always translate to improved quality in investment decision-making. In practice, many individuals engage in investment activities without adequate understanding of the risks, asset characteristics, or rational investment strategies. This behavior reflects a phenomenon known as herding behavior, where investors tend to follow the majority's decisions without conducting independent evaluation or analysis (Mittal, 2019).

Herding behavior is a widely recognized phenomenon in behavioral finance. Numerous studies have shown that this behavior often emerges during times of market uncertainty or when there is asymmetric information. In the context of the stock market, herding behavior is associated with emotional, speculative, and irrational investment decisions. Ahmad & Wu (2022), in their study of the Pakistani stock market, found that investors who exhibit herding tendencies tend to experience lower decision-making quality and face higher risks of losses due to overinvestment. In Indonesia, a study by Khalingga et al. (2024) confirmed that herding behavior significantly influences investment decisions in the stock market, especially during periods of uncertainty.

In the highly volatile cryptocurrency market, herding behavior becomes even more relevant. Investors often rely on popular opinions, social media trends, or community actions rather than conducting independent assessments of asset risks and intrinsic value. In the long term, herding behavior can be detrimental to individual investors and may contribute to overall market instability (Ahmad & Wu, 2022). Despite its importance, research on herding behavior in the context of cryptocurrency remains limited, particularly in Indonesia. Previous studies, such as those by Rosmiwilujeng et al. (2023) and Kalimasada & Rohim (2023), have explored this topic but are geographically limited to cities like Surabaya and Malang. Meanwhile, the Bandung Raya region shows significant potential in cryptocurrency investment activity, yet it has received little attention as a research focus in terms of investor behavior. This presents a research gap that needs to be addressed to enhance our understanding of investor behavior in the digital asset market. Therefore, this study aims to examine and analyze the influence of herding behavior on cryptocurrency investment decision-making in the Bandung Raya area. Using a quantitative approach, this research is expected to provide empirical and in-depth insights into the psychological dynamics of cryptocurrency investors in Indonesia.

## **LITERATURE REVIEW**

### **Herding Behavior**

Herding behavior refers to the tendency of investors to imitate the decisions of others without considering available information or their own beliefs (Bikhchandani & Sharma, 2000). Ramashar, Sandri, and Hidayat (2022) emphasize that psychological factors, including herding, play a significant role in investment decision-making. Firdaus, Ayati, and Aprilia (2022) argue that herding is a common behavioral error, as investment decisions are often based on others' actions or market rumors rather than objective information or the fundamental value of assets.

According to Mittal (2019), investors often follow group behavior without rational consideration because humans naturally desire social acceptance. Rahayu, Rohman, and Harto (2020) add that investment decisions are frequently influenced by irrational factors, such as limited analytical skills, incomplete information, and the urgency to act quickly to avoid missing opportunities. However, herding behavior can lead to negative outcomes, including excessive investment and increased market volatility, ultimately undermining market efficiency (Ahmad & Wu, 2022). Keswani et al. (2019) and Ngoc (2013) identify four main indicators of herding behavior: choice to trade, buying and selling decisions, volume to trade, and speed of herding. In the context of investor behavior, these indicators reflect the extent to which individual decisions are influenced by the collective actions of others in the market. Choice to trade reflects investors' tendency to select assets based on trends or the majority's choices rather than personal analysis.

Buying and selling decisions indicate that investors often buy or sell assets in response to widespread market actions. Volume to trade is related to the transaction size, which tends to increase when investors observe large participation from others. Speed of herding refers to how quickly investors react to changes in the market based on the observed behavior of other participants.

### **Investment Decision**

According to Shaik et al. (2022), an investment refers to a financial asset purchased to generate income or to be traded at a higher value in the future. Bodie, Kane, and Marcus (2014) define investment as the act of sacrificing something of value today with the hope of gaining profit in the future, while also considering potential risks. Prior to investing, investors need to ensure that available funds do not compromise their daily needs, understand the risk of the investment instruments, establish clear investment goals, consider the investment horizon, and be aware of applicable regulations and taxes. By considering these factors, investors are more likely to make well-informed and calculated decisions.

Investment decisions are strategic processes involving the allocation of funds across various assets in alignment with investment goals, risk profiles, and expected returns (Ogunlusi & Obademi, 2019; Amaliyah & Herwiyanti, 2020). Mandagie, Febrianti, and Fujianti (2020) emphasize that investment decisions involve evaluating risk and potential outcomes, while Ainia and Lutfi (2019) highlight the importance of asset allocation strategies to ensure compatibility with investment objectives, time frames, and risk tolerance.

Moreover, investment decisions are influenced by various factors, including cognitive limitations, intuitive reasoning, information constraints, demographic characteristics, financial literacy, income levels, and prior investment experience (Ahmad & Shah, 2020). Mittal (2019) states that many investors rely more on intuition than thorough analysis, often affected by behavioral biases such as overconfidence, herding, and hindsight bias. This aligns with Rahayu, Rohman, and Harto (2020), who suggest that investment decisions are often irrational due to limited analysis and incomplete information. Al-Tamimi and Kalli (2009) identify five key indicators that influence investment decisions: accounting information, advocate information, neutral information, personal financial needs, and self-image. Accounting information refers to market data such as price, market capitalization, and token supply. Advocate information includes recommendations from others such as friends, relatives, trading apps, influencers, or online communities. Neutral information consists of relatively objective information from external sources such as media outlets, market indices, economic indicators, and government statements. Personal financial needs relate to an investor's financial goals and risk tolerance. Self-

image reflects how an investor perceives the alignment between their personal identity and a particular cryptocurrency asset, including aspects like its reputation, trustworthiness, and emotional appeal.

### ***Cryptocurrency***

Cryptocurrency is a digital financial asset based on decentralized technology, which enables direct peer-to-peer transactions without the involvement of third parties such as banks. It uses cryptographic methods to ensure secure and transparent operations (Giudici, Milne, & Vinogradov, 2019; Nakamoto, 2008). The concept was first introduced through Bitcoin, created by Satoshi Nakamoto, and has since expanded into a broad ecosystem encompassing various tokens and use cases (Pernice & Scott, 2021).

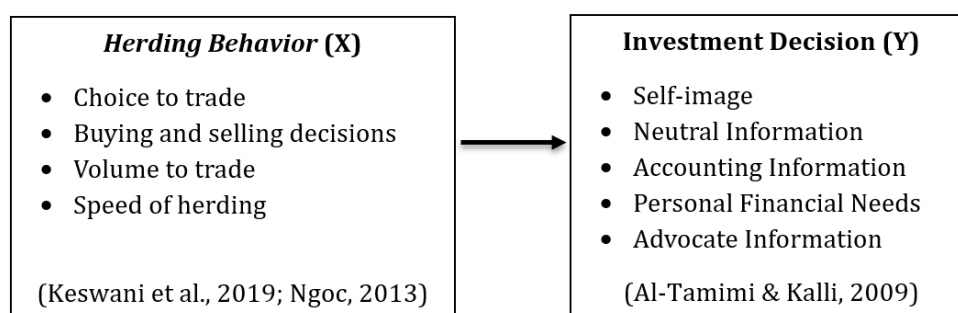
According to Hårdle, Harvey, and Reule (2020), cryptocurrencies like Bitcoin lack intrinsic value and rely entirely on market acceptance. Transactions are recorded on a public ledger through collective verification by network participants, independent of central banks and driven instead by blockchain algorithms. In addition, cryptocurrency involves a process known as mining, where new coins are generated and transactions are verified. Similar to gold mining, this process requires substantial computational power and carries high risks, as only successful miners are rewarded (Hårdle, Harvey, & Reule, 2020).

### **Previous Research and Hypothesis Development**

Several previous studies have shown that herding behavior positively influences investment decisions. In investment contexts, herding behavior occurs when investors mimic others' decisions due to social pressure, the desire for group acceptance, or market uncertainty (Mittal, 2019). This phenomenon can significantly affect investment choices, as investors often abandon rational analysis and the fundamental value of assets in favor of market trends or rumors. As a result, investment decisions may become misguided and driven by emotional bias, increasing the risk of loss and hindering the achievement of long-term investment goals (Mittal, 2019; Firdaus, Ayati, & Aprilia, 2022).

Rosmiwilujeng et al. (2023) found that herding behavior significantly influenced cryptocurrency investment decisions among millennials. Similar findings were reported by Khalingga et al. (2024) and Rahayu et al. (2020), who demonstrated that herding positively affected investment decisions in both stock markets and emerging economies. Hasnain and Subhan (2023) also confirmed this effect in the context of crypto investors in Pakistan, where herding behavior, along with overconfidence bias, significantly shaped financial decision-making. Additionally, Ahmad and Wu (2022) emphasized that herding not only impacts investment

decisions but also reduces performance and perceptions of market efficiency. Although Kalimasada and Rohim (2023) reported different results in a local study conducted in Malang, the consistency of most findings supports the hypothesis that herding behavior has a notable influence on investment decisions. Based on previous studies, the following conceptual framework and hypothesis are proposed.



**H1: Herding behavior has a positive effect on investment decisions.**

Figure 2. Conceptual Framework

## METHOD

This research adopts a quantitative approach supported by IBM SPSS Statistics 27, focusing on the collection and analysis of numerical data to objectively examine the relationships between variables. The study centers on cryptocurrency asset investment; hence, the target population includes individuals who have invested or are currently investing in cryptocurrency, with the criteria of having at least one year of investment experience and residing in Bandung Raya area. A non-probability sampling method was employed, specifically purposive sampling. Since the exact population size is unknown, the sample size was determined using an internal estimation method. Referring to Hair and Sekaran's guidelines, the ideal sample size was calculated by multiplying the total number of indicators (9) by 15, resulting in 135 participants—an appropriate size for studies involving human respondents (Chaniago, Muharam, & Efawati, 2023).

Data were obtained through a structured questionnaire consisting of closed-ended questions measured on a Likert scale. The items used in the questionnaire were adapted from previously validated studies. The data analysis process included several steps: validity and reliability testing to ensure the measurement tools were sound, classical assumption testing to meet the requirements for regression analysis, descriptive statistics to present the data's general characteristics, and both correlation and linear regression analyses to determine the strength and direction of the relationship between herding behavior and investment decisions. This methodological approach aims to provide robust and credible empirical findings regarding the influence of herding behavior on cryptocurrency investment decision-making.

## RESULT

### Instrument Testing

The instrument testing in this study was conducted in two stages: validity testing and reliability testing, to ensure that the measurement tools used were appropriate and trustworthy for data collection. The validity test was carried out using Pearson correlation analysis on a preliminary sample of 30 respondents. The results showed that all items for both variables X and Y had Pearson correlation values above 0.3 and significance levels below 0.05. These findings indicate that each item in the questionnaire meets the required validity criteria and is statistically suitable for use in the main study.

Table 1. Reliability Test of Variable X

Cronbach's Alpha	N of Items
.802	8

In addition, a reliability test was conducted to assess the internal consistency of each item in the instrument. As shown in Table 1 and Table 2, the results indicate that the Cronbach's Alpha value was 0.802 for Variable X and 0.845 for Variable Y. Both values fall within the "good" category, indicating a high level of reliability. Therefore, all items in the research instrument have been proven to be both valid and reliable, making them suitable for optimal use in data collection and further analysis.

Table 2. Reliability Test of Variable Y

Cronbach's Alpha	N of Items
.845	10

### Descriptive Analysis

Table 3 presents the results of the descriptive analysis for the independent variable (X), which is measured through four main indicators: choice to trade, buying and selling decisions, volume to trade, and speed of herding. All items recorded average scores above 3.5, indicating a general tendency among respondents to agree with the given statements. The highest mean was observed in indicator X\_BS2 (4.2293), while the highest standard deviation was found in X\_VT1 (0.98345), suggesting greater variability in respondents' answers. In contrast, other indicators showed lower variation, reflecting consistent and generally positive perceptions among respondents toward the questionnaire items.

Table 3. Descriptive Analysis of Variable X

Variable	N	Minimum	Maximum	Mean	SD
X_CT1	157	1	5	4.1529	0.87827
X_CT2	157	1	5	4.0701	0.87056
X_BS1	157	1	5	4.0955	0.79891
X_BS2	157	1	5	4.2293	0.8076
X_VT1	157	1	5	3.8025	0.98345
X_VT2	157	1	5	4.1465	0.7911
X_SH1	157	1	5	4.0637	0.85995
X_SH2	157	1	5	4.1847	0.89027

Next, the descriptive analysis for the dependent variable (Y), which consists of five indicators—accounting information, advocate information, neutral information, personal financial needs, and self-image—is presented in Table 4. All items showed mean values above 4.0, except for Y\_ADI2. The SI indicator demonstrated high average scores (4.2420 and 4.0510) with low standard deviations, reflecting positive and consistent perceptions. NI also showed positive tendencies, with mean values of 4.2000 and 4.2166, although Y\_NI1 exhibited slightly higher variability. The ACI indicator showed stable mean values (4.1465 and 4.1720) and good homogeneity in perception. The PF indicator, with means of 4.1529 and 4.2102, indicates the importance of personal financial needs in decision-making, accompanied by low response variability. However, ADI reflected less homogeneous perceptions, as Y\_ADI1 had a high mean (4.3121), while Y\_ADI2 scored lower (3.4586) with the highest variation in responses. Overall,

Table 4. Descriptive Analysis of Variable Y

Variable	N	Minimum	Maximum	Mean	SD
Y_SI1	157	1	5	4.242	0.87267
Y_SI2	157	1	5	4.051	0.84578
Y_NI1	157	1	5	4	0.99357
Y_NI2	157	1	5	4.2166	0.84215
Y_ACI1	157	1	5	4.1465	0.83063
Y_ACI2	157	1	5	4.172	0.8179
Y_PF1	157	1	5	4.1529	0.87827
Y_PF2	157	1	5	4.2102	0.75134
Y_ADI1	157	1	5	4.3121	0.83092
Y_ADI2	157	1	5	3.4586	1.00314

respondents exhibited positive and relatively consistent perceptions across all indicators, except for a few items with greater variation in viewpoints.

### Normality Test

The One-Sample Kolmogorov-Smirnov method was employed to test whether the residual data are normally distributed, which is a prerequisite for proceeding with regression



analysis. The results of this test are shown in Table 5.

Table 5. Normality Test

		Unstandardized Residual
<b>N</b>		157
<b>Normal Parameters</b>	Mean	0.00000000
	Std. Deviation	2.83569896
<b>Most Extreme Differences</b>	Absolute	0.065
	Positive	0.043
	Negative	-0.065
<b>Test Statistic</b>		0.065
<b>Asymp. Sig. (2-tailed)</b>		0.200
<b>Monte Carlo Sig. (2-tailed)</b>	Sig.	0.110
	99% Confidence Interval	Lower Bound
		Upper Bound
		0.102
		0.118

The test statistic value obtained was 0.065, with an Asymp. Sig. (2-tailed) of 0.200. Since this significance level exceeds the threshold of  $\alpha = 0.05$ , it can be concluded that the residuals are normally distributed. Furthermore, the Monte Carlo Significance (2-tailed) was 0.110, with a 99% confidence interval ranging from 0.102 to 0.118. These results further support the conclusion that the data does not significantly deviate from a normal distribution.

### Heteroscedasticity Test

The heteroscedasticity test is used to detect any inconsistencies in the variance of residuals within the linear regression model. The presence of heteroscedasticity may distort estimation results, rendering regression analysis less accurate and unreliable. In this study, the test was conducted using a scatterplot of the Regression Standardized Predicted Values against the Regression Studentized Residuals. As illustrated in Figure 3, the residuals appear to be randomly scattered around the horizontal axis, showing no systematic pattern. The absence of distinctive patterns—such as cone-shaped, curved, or triangular formations—suggests that the residual variance remains constant across prediction levels. Thus, the model does not exhibit signs of heteroscedasticity. This confirms that the assumption of homoscedasticity is met, supporting the validity of the regression model for further analysis.

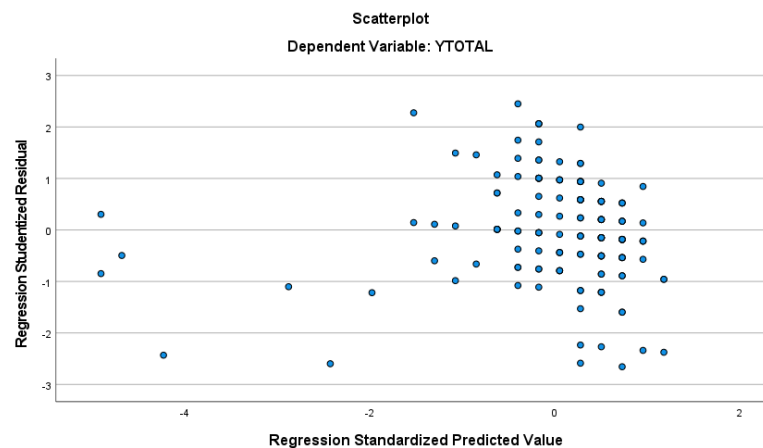


Figure 3. Scatterplot

### Correlation Test

A correlation test was conducted to assess the strength of the relationship between herding behavior and investment decisions. As shown in Table 6, the Pearson correlation coefficient is 0.863, with a significance level of less than 0.001. This coefficient indicates a very strong relationship, as it exceeds the 0.8 threshold. This indicates a strong relationship between herding behavior and investment decisions.

Table 6. Correlation Test

	<b>Herding Behavior</b>	<b>Investment Decision</b>
Herding Behavior	Pearson Correlation	1
	Sig. (2-tailed)	<.001
	N	157
Investment Decision	Pearson Correlation	0.863
	Sig. (2-tailed)	<.001
	N	157

Additionally, the positive correlation indicates that the relationship between the two variables is in the same direction. In other words, the greater the intensity of herding behavior displayed by investors, the more likely they are to make investment decisions. The significance level of  $< 0.001$ , which is lower than the 1% threshold (0.01), confirms that this relationship is statistically significant. Therefore, the null hypothesis ( $H_0$ ) is rejected, and the alternative hypothesis ( $H_1$ ) is accepted, confirming that herding behavior has a significant positive effect on investment decisions.

### Simple Regression Test

A linear regression analysis was conducted to assess the extent to which the independent variable influences the dependent variable, as well as the direction and strength of the relationship. In this study, linear regression was used to evaluate the influence of herding behavior on investment decisions.

Table 7. Simple Regression Test

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	5.191	1.697		3.06	0.003
Herding_Behavior	1.092	0.051	0.863	21.28	<.001

$$Y = 5,191 + 1,092X$$

The analysis presented in Table 7 shows that the regression coefficient for herding behavior is 1.092. This means that for every one-unit increase in herding behavior, investment decisions are projected to increase by 1.092 units, assuming all other variables remain constant. The constant value of 5.191 represents the predicted investment decision score when herding behavior is at zero.

Furthermore, the t-value of 21.276 and the significance level of less than 0.001 demonstrate that herding behavior has a statistically significant influence on investment decisions. The standardized beta value of 0.863 further strengthens this finding, indicating that the influence is not only significant but also strong and positive. Based on these results, it can be concluded that herding behavior is a key determinant influencing investment decision-making.

## DISCUSSION

Based on the data obtained and analyzed through various statistical tests, it was found that herding behavior has a strong positive influence on investment decisions in cryptocurrency among investors residing in the Bandung Raya region. The correlation test yielded a Pearson coefficient of 0.863 with a significance level of < 0.001, indicating a very strong, positive, and statistically significant relationship between herding behavior and investment decisions. Additionally, the regression results showed a coefficient of 1.092 with a significance level of < 0.001, signifying that an increase in herding behavior significantly raises the likelihood of making investment decisions in digital assets. These findings reinforce the notion that investor behavior in Bandung Raya tends to be influenced more by social trends and the actions of the majority rather than by deep, fundamental, or technical analyses of the digital assets involved. In other words, when investors observe others around them or online communities actively purchasing a certain cryptocurrency, they feel compelled to follow suit, assuming that the collective action represents a sound decision. This reflects the dominant influence of social psychology in investment decision-making, which characterizes herding behavior.

The results are consistent with previous studies. Research by Rosmiwilujeng, Satyawan, and Paino (2023) on millennials in Surabaya also found a positive influence of herding behavior

on cryptocurrency investment decisions. They emphasized that emotional impulses to follow the majority were a dominant driver in digital asset investment. Similarly, Khalingga et al. (2024) found significant herding behavior effects in the context of the Indonesian stock market. Although the investment objects differed—stocks versus cryptocurrency—the underlying psychological dynamics remain similar, as both are high-risk assets heavily influenced by market sentiment and collective behavior. However, these findings differ from those of Kalimasada and Rohim (2023), who found no significant influence of herding behavior on cryptocurrency investment decisions in Malang. This discrepancy is likely due to differences in respondent characteristics, such as investment experience, risk profiles, and financial literacy levels. This suggests that herding behavior as a psychological variable does not operate uniformly across all populations and may be influenced by contextual factors.

In summary, this study provides empirical evidence that in the context of cryptocurrency investment—particularly in Bandung Raya—herding behavior plays a significant role in shaping investor behavior. Therefore, improving financial literacy and understanding of behavioral finance becomes essential to help investors make more rational and objective decisions, rather than simply following social trends. These findings also have implications for regulators and digital investment service providers, who should consider psychological factors when designing investor protection policies and market education strategies.

### **CONCLUSION**

Investors in Bandung Raya still tend to make investment decisions irrationally, often following market trends or the decisions of the majority without conducting in-depth fundamental analysis. This behavior indicates that psychological factors—particularly herding—play a dominant role in digital asset investment decision-making. It has been demonstrated that herding behavior has a positive and significant effect on cryptocurrency investment decisions, as evidenced by the correlation test, which shows a very strong and positive relationship (0.863), and the simple linear regression, which shows a regression coefficient of 1.092 with a significance level of  $< 0.001$ . This means that the higher the level of herding behavior among investors, the greater their tendency to make investment decisions. This research supports and strengthens previous studies that have shown herding behavior significantly influences investment decisions, especially in the cryptocurrency market, where collective behavior plays a dominant role in investor decision-making. Investors are encouraged to improve their financial literacy, especially regarding cryptocurrency and fundamental asset analysis. With adequate knowledge, they will be better equipped to make rational decisions based on objective considerations, rather than simply following market trends.

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