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Does Financial Literacy Reduce Herding? Evidence from Investment Decisions in East Java

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Abstract. This study aims to examine the effect of financial literacy on investment decisions, both directly and indirectly through herding behavior among investors in East Java Province. This research employs a quantitative approach using a survey method, with data analyzed through SEM-PLS. The population consists of retail investors in East Java, with a sample of 262 respondents. The results indicate that financial literacy has a positive and significant effect on investment decisions, and a negative and significant effect on herding behavior. Furthermore, herding behavior positively influences investment decisions and acts as a mediating variable in the relationship between financial literacy and investment decisions. These findings suggest that investment decisions are influenced not only by cognitive factors but also by psychological and social factors. This study implies that improving financial literacy can enhance the quality of investment decisions while reducing herd behavior tendencies among investors. Theoretically, the findings support Prospect Theory in explaining investor behavior under uncertainty and contribute to the behavioral finance literature by integrating financial literacy and herding behavior into a single conceptual model. The novelty of this study lies in examining the mediating role of herding behavior within the context of retail investors in regional Indonesia, particularly East Java.

Keywords: Financial literacy, herding behavior, investment decision

I. Introduction

The development of global financial markets over the past decade has shown a significant increase in retail investor participation, particularly following the digitalization of investment through online platforms and trading applications. This phenomenon is not only observed in developed countries but also in emerging economies such as Indonesia, where the number of investors has grown rapidly (Otoritas Jasa Keuangan, 2025). However, this increase in the quantity of investors is not necessarily accompanied by improvements in the quality of rational investment decision-making. A study by Bhutto et al. (2025) indicates that retail investors tend to make systematic errors due to behavioral biases, one of which is herding behavior, defined as the tendency to follow the decisions of the majority without thorough analysis. Globally, this phenomenon is further reinforced by the rise of social media and investment forums, which accelerate the dissemination of both information and misinformation (Bikhchandani & Sharma, 2001). In the Indonesian context, relatively low financial literacy levels (OECD, 2023) increase the likelihood of investors being trapped in herd behavior, resulting in suboptimal investment decisions. Therefore, research examining the mechanism through which financial literacy influences investment decisions via herding behavior has become increasingly important to address the challenge of improving investor quality amid rapid market growth.

The relationship between financial literacy, herding behavior, and investment decisions in this study can be explained through Prospect Theory (Kahneman & Tversky, 1979). This theory posits that individuals tend to behave irrationally when making decisions under uncertainty, as they are more influenced by perceived gains and losses rather than the objective value of expected outcomes. Individuals are generally loss-averse, meaning they are more sensitive to losses than gains, which often leads to deviations from rational decision-making principles. In this context, financial literacy plays a crucial role in enhancing individuals' ability to evaluate risks and reduce perceptual biases toward losses (Lusardi & Mitchell, 2011). However, when financial literacy is low, individuals tend to experience higher levels of uncertainty and seek "social safety" by following the decisions of others, commonly referred to as herding behavior (Banerjee, 1992). From the perspective of Prospect Theory, such behavior can be understood as a strategy to minimize perceived potential losses, even though it may not be objectively optimal. Furthermore, herding behavior influences investment decisions as individuals rely more on signals derived from others' actions rather than personal analysis, ultimately leading to biased and inefficient decisions (Bikhchandani &

Sharma, 2001). Thus, Prospect Theory provides a robust conceptual framework to explain how financial literacy affects investment decisions both directly and indirectly through the mediation of herding behavior.

East Java Province was selected as the research object due to its representative economic and demographic characteristics in the context of retail investor development in Indonesia. East Java is one of the provinces with the second-largest economic contribution in Indonesia (Otoritas Jasa Keuangan, 2025) and has experienced a significant increase in the number of capital market investors in recent years (KSEI, 2024). Additionally, the level of financial literacy in this region still shows considerable variation across different areas (Otoritas Jasa Keuangan, 2024), providing an opportunity to examine how such differences influence investment behavior. The diversity of socio-economic backgrounds in East Java also makes it an ideal empirical setting to investigate herding behavior in a local context, particularly in the era of investment digitalization.

Although numerous studies have examined the relationship between financial literacy and investment decisions, several gaps remain. First, most previous studies focus only on the direct effect of financial literacy on investment decisions without considering the role of psychological variables as mediators (Dharma et al., 2024; Murini et al., 2025; Seraj et al., 2022). Second, research on herding behavior has largely been conducted in developed markets and among institutional investors, thus providing limited representation of retail investor behavior in emerging economies (Gupta & Shrivastava, 2022; Quaicoe & Eleke-Aboagye, 2021). Third, empirical findings regarding the effect of herding behavior on investment decisions remain inconsistent, with some studies reporting positive effects while others find negative impacts (Gurung et al., 2024). Fourth, studies that specifically test a mediation model involving financial literacy, herding behavior, and investment decisions in the Indonesian context, particularly at the regional level such as East Java, are still very limited. These gaps highlight the need for more comprehensive and context-specific research.

Based on these gaps, this study offers several significant contributions. Empirically, it provides new evidence on the role of herding behavior as a mediating variable in the relationship between financial literacy and investment decisions among Indonesian retail investors. Practically, the findings can serve as a basis for regulators such as the Financial Services Authority (Otoritas Jasa Keuangan) and industry practitioners in designing more effective financial education programs to reduce behavioral biases among investors. Theoretically, this study enriches the behavioral finance literature by integrating financial literacy and social behavior perspectives into a single conceptual model. The novelty of this research lies in examining the mediating mechanism of herding behavior within the regional context of Indonesia, which remains underexplored, as well as in adopting an integrative approach combining cognitive and social factors in investment decision-making. The objectives of this study are: (1) to analyze the effect of financial literacy on investment decisions; (2) to examine the effect of financial literacy on herding behavior; (3) to analyze the effect of herding behavior on investment decisions; and (4) to test the mediating role of herding behavior in the relationship between financial literacy and investment decisions in East Java Province. This study is expected to contribute academically as a reference for further research development and practically in improving the quality of investment decisions among the public.

II. Literature Review

Prospect Theory (Kahneman & Tversky, 1979) is one of the foundational theories in behavioral finance that explains how individuals make decisions under conditions of uncertainty. It posits that individuals evaluate outcomes based on a certain reference point and exhibit two main characteristics: loss aversion and diminishing sensitivity (Kahneman, 2020). Loss aversion refers to the tendency for losses to be perceived more intensely than gains of equal value, leading individuals to avoid risk when in a gain position but to seek risk when facing losses. Meanwhile, diminishing sensitivity implies that changes in value at lower levels have a greater psychological impact than equivalent changes at higher levels. In addition, individuals tend to engage in probability weighting, whereby they overestimate the likelihood of low-probability events and underestimate high-probability ones, resulting in distorted risk assessments.

In the context of investment decisions, Prospect Theory explains why investors often behave irrationally. When faced with informational uncertainty risk perception becomes biased and oriented toward loss avoidance. This condition encourages investors to seek “social validation” as a mechanism to reduce uncertainty, which in turn triggers herding behavior. In other words, following the majority is not merely a social phenomenon but also a psychological response to the fear of losses, as described in Prospect Theory. Investors perceive that imitating others may minimize subjective risk, even though it does not necessarily lead to objectively optimal decisions (Naiwen et al., 2021).

Furthermore, the relationship between financial literacy and Prospect Theory lies in an individual's ability to manage cognitive biases. High levels of financial literacy enable investors to better understand

concepts such as risk, diversification, and probability, thereby reducing perceptual distortions described in Prospect Theory (Mutlu & Özer, 2022). Conversely, low financial literacy increases the likelihood of individuals being trapped in biases such as excessive loss aversion, which ultimately heightens the tendency to engage in herding behavior. In this relationship, herding behavior acts as a mediating variable that links financial literacy to investment decisions. This implies that financial literacy influences decisions not only directly but also indirectly through an individual's ability to avoid herding behavior (Sulistiyani et al., 2024).

a. The Effect of Financial Literacy on Herding Behavior among Investors in East Java Province

Based on Prospect Theory (Kahneman & Tversky, 1979), individuals under uncertainty tend to exhibit irrational behavior due to psychological biases such as loss aversion and distorted risk perception. In the investment context, limited financial literacy reduces an individual's ability to understand risk and objectively evaluate information, thereby increasing decision-making uncertainty. This condition encourages investors to rely on external references to reduce subjective risk, one of which is following the majority, known as herding behavior. Conversely, investors with higher levels of financial literacy tend to have a better understanding of risk and return, making them more confident in making independent decisions and less susceptible to collective behavior (Amirat & Alwafi, 2020; Rizal & Damayanti, 2019).

Previous studies Kusuma & Theadora, (2024); Puspitarini et al. (2025); Widarno et al. (2024) indicate that financial literacy influences herding behavior. Based on Prospect Theory and empirical evidence, the following hypothesis is proposed:

H1: Financial literacy has a negative effect on herding behavior in East Java Province.

b. The Effect of Financial Literacy on Investment Decisions among Investors in East Java Province

According to Prospect Theory (Kahneman & Tversky, 1979), individuals making decisions under uncertainty are influenced by psychological biases such as loss aversion, reference dependence, and probability distortion. In investment contexts, these biases may lead to suboptimal decisions, such as excessive risk aversion or over-risk-taking. Financial literacy serves as a cognitive capability that enables individuals to understand risk, return, and diversification more rationally, thereby reducing the perceptual distortions explained by Prospect Theory. Investors with higher financial literacy tend to evaluate information more objectively, are less influenced by emotional responses to losses, and are more capable of making rational and well-directed investment decisions. In contrast, individuals with low financial literacy are more vulnerable to psychological biases, resulting in less optimal investment decisions (Dharma et al., 2024; Murini et al., 2025).

Prior studies Hudha (2021); Khairiyati & Krisnawati (2019); Putri & Rahyuda (2017) suggest that financial literacy affects investment decisions. Based on Prospect Theory and empirical evidence, the following hypothesis is proposed:

H2: Financial literacy has a positive effect on investment decisions in East Java Province.

c. The Effect of Herding Behavior on Investment Decisions among Investors in East Java Province

Based on Prospect Theory (Kahneman & Tversky, 1979), individuals under uncertainty tend to behave according to subjective perceptions of risk and loss. One implication is loss aversion, where individuals prioritize avoiding losses over achieving gains. In investment contexts, this condition encourages investors to seek safety by following the majority, known as herding behavior (Quaicoe & Eleke-Aboagye, 2021). This behavior often reduces independent analysis and increases reliance on social information, leading to biased and suboptimal investment decisions. Investors who engage in herding are more likely to enter or exit markets at inappropriate times, as they follow trends rather than fundamentals. Thus, higher levels of herding behavior increase the likelihood of reduced investment decision quality (Rahyuda & Candradewi, 2023).

Previous studies Ahmed & Noreen (2021); Gupta & Shrivastava (2022) indicate that herding behavior influences investment decisions. Based on Prospect Theory and empirical evidence, the following hypothesis is proposed:

H3: Herding behavior has a positive effect on investment decisions in East Java Province.

d. The Effect of Financial Literacy on Investment Decisions through Herding Behavior among Investors in East Java Province

Based on Prospect Theory (Kahneman & Tversky, 1979), individuals under uncertainty are influenced by subjective perceptions of risk, particularly loss aversion and probability distortion. In the digital era, informational uncertainty becomes more complex due to the rapid and massive flow of information from social media and investment platforms, which gives rise to herding behavior defined as the tendency of

investors to follow majority decisions disseminated online (Hidayat et al., 2024). Investors with low financial literacy are more vulnerable to this bias due to limitations in evaluating information credibility and understanding risk objectively, making them more susceptible to public opinion. Conversely, investors with higher financial literacy possess stronger analytical skills to filter information, thereby reducing herding tendencies and enabling more rational investment decisions (Arriqoh & Zoraya, 2024).

Research by Jain et al. (2023) suggests that herding behavior mediates the relationship between financial literacy and investment decisions. Based on Prospect Theory and empirical evidence, the following hypothesis is proposed:

H4: Financial literacy positively affects investment decisions through the reduction of herding behavior in East Java Province.

III. Research Method

This study employs a quantitative approach with a survey design to examine the causal relationships between financial literacy and herding behavior on investment decisions, with herding behavior acting as a mediating variable. This design is appropriate for testing a conceptual model involving multiple latent constructs as well as direct and indirect relationships (Creswell & Creswell, 2022; Ghozali, 2021).

Data analysis was conducted using Structural Equation Modeling–Partial Least Squares (SEM-PLS). The selection of SEM-PLS was based on several methodological considerations (Hair et al., 2019). First, SEM-PLS is suitable for theory-driven models that are contextual and still in the stage of empirical development. Second, SEM-PLS allows for the simultaneous estimation of complex models involving latent variables and mediation effects. Third, this method is relatively robust for moderate sample sizes and does not require strict multivariate normality assumptions. Therefore, the use of SEM-PLS in this study is not merely a technical choice but reflects the alignment between research objectives, model complexity, and data characteristics (Hair et al., 2019).

This study examines three latent variables: financial literacy, herding behavior, and investment decisions. Each construct was measured using multiple indicators adapted from prior studies and adjusted to the context of investors in East Java.

The population of this study consists of stock investors in East Java, Indonesia. A total of 563 online questionnaires were distributed between January and March 2026. From the collected responses, 262 questionnaires met the research criteria and were used as the final sample.

Table 1. Questionnaire Distribution Results

Information	Response	
	Frequency	%
Sent	563	100%
Received	478	84.9%
Un-appropriate respondent	216	38.3%
Usable questionnaire	262	46.5%

Source: Data own research (2026)

Financial literacy (X) was measured using the following indicators: basic financial knowledge, understanding of risk and return, investment diversification, financial planning ability, and evaluation of financial products (Lusardi & Mitchell, 2011; Mutlu & Özer, 2022; OECD, 2018). Herding behavior (Z) was measured using indicators such as following majority decisions, dependence on social information, neglect of personal analysis, reactions to market trends, and the influence of media/digital information (Banerjee, 1992; Bikhchandani & Sharma, 2001; Bouri et al., 2019). Meanwhile, investment decisions (Y) were measured using indicators including decision rationality, risk consideration, decision consistency, accuracy in selecting investment instruments, and evaluation of investment outcomes (Bratiloveanu et al., 2023; Juniarta & Purbawangsa, 2020; Lutfi, 2024).

All instrument items were operationalized using a five-point Likert scale ranging from strongly disagree to strongly agree. A pilot test was conducted to ensure the reliability, clarity, and validity of the questionnaire items prior to full-scale distribution. The use of standardized instruments ensures consistency in data interpretation and strengthens the methodological rigor required for explanatory analysis using SEM-PLS.

Hypothesis testing was performed using the bootstrapping procedure in SEM-PLS to evaluate the significance of path coefficients, both direct and indirect effects, based on the resulting t-statistics and p-values (Hair & Alamer, 2022). The structural model in this study specifies financial literacy as the

exogenous variable, herding behavior as the mediating variable, and investment decisions as the endogenous variable. This model is designed to capture both the direct effect of financial literacy on investment decisions and its indirect effect through herding behavior. The structural equations are formulated as follows:

$$Z = \beta_1 X_1 + \varepsilon_1 \dots\dots\dots (1)$$

$$Y = \beta_2 X_1 + \beta_3 Z + \varepsilon_2 \dots\dots\dots (2)$$

where:

Z = Herding Behavior

Y = Investment Decision

X₁ = Financial Literacy

β₁– β₃ = Path coefficients

ε₁–ε₂ = Error terms

Before estimating the structural relationships, the measurement model was evaluated to ensure validity and reliability using cross-loading values and Cronbach's Alpha. Multicollinearity was assessed using the Variance Inflation Factor (VIF) to avoid indicator redundancy. After all measurement criteria were satisfied, the analysis proceeded to the structural model to evaluate path coefficients, effect size (f²), predictive relevance (Q²), and the significance of both direct and indirect effects using the bootstrapping procedure.

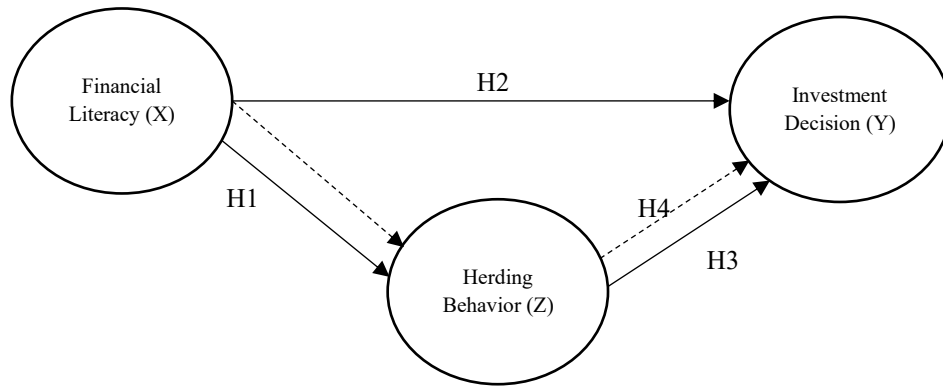


Figure 1. Research Model

IV. Results and Discussion

Based on Table 2, the majority of respondents fall within the 21–30 age group (53.2%), indicating that investors in East Java Province are predominantly young individuals in the early stages of financial decision-making. In terms of education, most respondents hold a bachelor's degree (83.8%), suggesting relatively good financial literacy potential, although this does not automatically guarantee rational decision-making ability. From the perspective of investment experience, most respondents have 1–3 years of experience (52.6%), indicating that they are largely novice investors. This condition is important, as investors with limited experience tend to face higher uncertainty and are more vulnerable to external influences, including herding behavior.

The geographical distribution, dominated by cities such as Malang (32.3%) and Sidoarjo (19.8%), indicates that investment activity is not concentrated solely in major cities like Surabaya but has spread regionally across East Java. This strengthens the relevance of the study in a regional context, as variations in social environment and access to information may influence investment behavior.

Table 2. Respondent Characteristics

Category	Value	Percentage (%)
Age	21 – 30 Years	53.2
	31 – 40 Years	35.6
	41 – 50 Years	11.2
Last Education	Senior High School	14.2
	Bachelor	83.8

Length of investment experience	> Bachelor	39.6
	1 - 3 Years	52.6
	3 – 5 Years	43.6
	> 5 Years	3.8
Residence	Surabaya	15.5
	Malang	32.3
	Sidoarjo	19.8
	Jember	17.9
	Others	14.5
Total		100%

Source: Data own research (2026)

Table 3. Descriptive Statistics Results

Information	N	Min.	Max.	Mean	Std. Dev.
Financial Literacy	262	13	25	19.6380	2.25680
Herding Behavior	262	14	25	19.4540	2.41818
Investment Decisions	262	13	25	19.4260	2.50141

Source: Data own research (2026)

Based on Table 3, all variables have the same number of observations (N = 262), indicating data consistency. Financial literacy has the highest mean value (19.6380) with a standard deviation of 2.25680, suggesting that respondents generally possess relatively good and homogeneous financial literacy levels. Herding behavior has a mean of 19.4540 and a standard deviation of 2.41818, indicating a relatively high tendency to follow majority behavior, with slightly greater variability compared to financial literacy. Meanwhile, Sharia investment decisions have a mean of 19.4260 and the highest standard deviation (2.50141), suggesting that although the overall level of investment decision-making is relatively high, there is greater behavioral variation among respondents.

The relatively similar minimum and maximum ranges (approximately 13–25) across all variables indicate a balanced distribution of responses without extreme deviations. Overall, these results suggest that respondents exhibit good financial literacy while still demonstrating a relatively high tendency toward herding behavior, which is reflected in the variability of investment decisions.

Table 4. Outer Loading Results

Indicator	X	Y	Z
X1.1	0.772	0.569	0.679
X1.2	0.923	0.725	0.764
X1.3	0.826	0.654	0.652
X1.4	0.296	0.181	0.264
X1.5	0.759	0.713	0.695
Y.1	0.710	0.814	0.652
Y.2	0.569	0.722	0.590
Y.3	0.630	0.846	0.687
Y.4	0.449	0.608	0.378
Y.5	0.678	0.798	0.770
Z.1	0.714	0.729	0.880
Z.2	0.803	0.700	0.884
Z.3	0.758	0.695	0.891
Z.4	0.228	0.186	0.890
Z.5	0.714	0.792	0.849

Source: Data own research (2026)

Based on Table 4, most indicators across variables X, Y, and Z meet the convergent validity criteria, as their loading factors exceed 0.70, indicating that they validly reflect their respective constructs. However, several indicators, such as X1.4, Y.4, and Z.4, do not meet this threshold and consistently show loadings below 0.70, while some others fall within a marginal range (0.50–0.69). This suggests that although the

measurement model is generally adequate, some weak indicators may reduce construct quality and should be considered for elimination or revision to improve validity and reliability.

Table 5. Heterotrait-Monotrait Ratio (HTMT)

	X	Y	Z
X			
Y	0.873		
Z	0.856	0.858	

Source: Data own research (2026)

Based on Table 5, all HTMT values are below the threshold of 0.90, indicating that the model satisfies discriminant validity. This demonstrates that each construct is sufficiently distinct and does not overlap conceptually, allowing each variable to measure a clearly different concept.

Table 6. Fornell–Larcker Criterion

Variable	X	Y	Z
X	0.848		
Y	0.807	0.862	
Z	0.812	0.829	0.794

Source: Data own research (2026)

Based on Table 6, the square root of AVE for each construct (X = 0.848; Y = 0.862; Z = 0.794) is generally higher than the inter-construct correlations, although some correlations are relatively close. This indicates that discriminant validity is largely satisfied, although the proximity of certain relationships suggests the need for careful interpretation.

Table 7. Reliability and Multicollinearity Test Results

Variable	Cronbach's Alpha	rho A	Composite Reliability	AVE	VIF
X	0.777	0.846	0.853	0.559	1.643
Y	0.818	0.839	0.872	0.581	1.000
Z	0.830	0.890	0.886	0.681	1.643

Source: Data own research (2026)

Based on Table 7, all variables meet the criteria for reliability and construct validity, as indicated by Cronbach's Alpha and Composite Reliability values above 0.70, and AVE values exceeding 0.50. This suggests strong internal consistency and adequate explanatory power of the constructs. Additionally, all VIF values are well below the threshold of 5, indicating no multicollinearity issues. Thus, the model is reliable, valid, and free from multicollinearity concerns.

Table 8. R-Square and Q-Square Results

Variable	SSO	SSE	Q ² (=1-SSE/SSO)	R Square	Adjusted R Square
X	1.629.000	1.629.000			
Y	1.629.000	965.605	0.407	0.724	0.722
Z	1.629.000	647.944	0.602	0.726	0.724

Source: Data own research (2026)

Based on Table 8, the model demonstrates strong explanatory and predictive power. The R-square values for Y (0.724) and Z (0.726) indicate that approximately 72% of the variance in each endogenous variable is explained by the model. The adjusted R-square values (Y = 0.722; Z = 0.724) suggest model stability without overfitting. Furthermore, Q² values of 0.407 (Y) and 0.602 (Z), both greater than zero, indicate strong predictive relevance, particularly for Z. As an exogenous variable, X does not have R-square or Q² values. Overall, the structural model demonstrates strong explanatory and predictive capability.

Table 9. F-Square Results

	X	Y	Z
X		0.236	0.264
Y			
Z		0.262	

Source: Data own research (2026)

Based on Table 9, financial literacy (X) has an effect size of 0.236 on investment decisions (Y) and 0.264 on herding behavior (Z), while herding behavior (Z) has an effect size of 0.262 on investment decisions (Y). These values fall within the medium effect category (0.15–0.35), indicating that each relationship contributes meaningfully to explaining the endogenous variables.

Table 10. Model Fit Results

	Saturated Model	Estimated Model
SRMR	0.106	0.106
d_ ULS	1.345	1.345
d_ G	0.829	0.829
Chi-Square	1.014.547	1.014.547
NFI	0.675	0.675

Source: Data own research (2026)

Based on Table 10, the model fit can be considered less than optimal. The SRMR value of 0.106 exceeds the recommended threshold (<0.08), indicating a discrepancy between the model and empirical data. Additionally, the NFI value of 0.675 falls below the recommended level (≥ 0.90), suggesting inadequate goodness of fit. Although d_ ULS and d_ G do not have strict thresholds, their values are insufficient to offset the weaknesses in key indicators such as SRMR and NFI. The very large Chi-square value also indicates discrepancies between the theoretical model and observed data, although this measure is sensitive to sample size. Thus, while the model cannot be considered fully fit, it remains acceptable within the PLS-SEM framework, with the caveat that further model refinement and development are recommended.

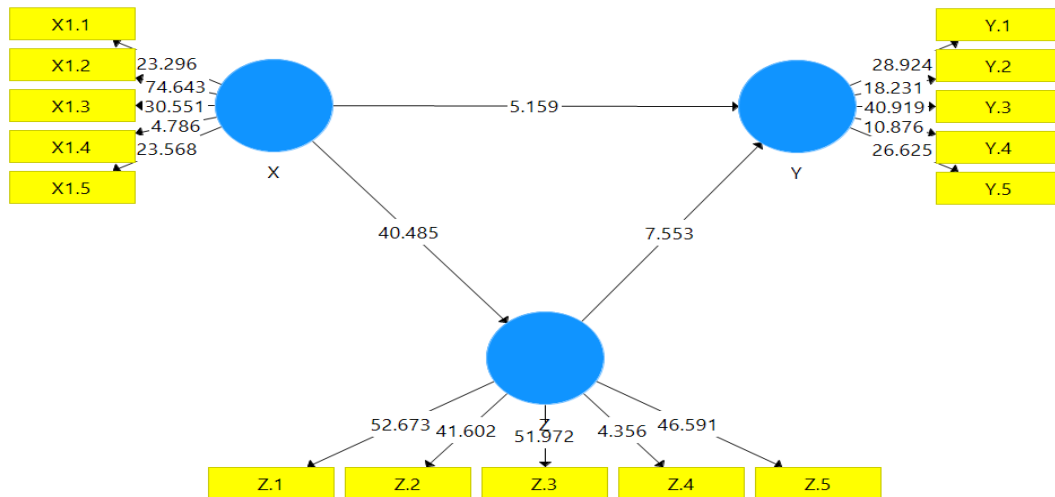


Figure 2. Result Test

Table 11. Hypothesis Testing Results

Hypothesis	Variable	Original Sample	STDEV	T Statistics	P-value	Result
H1	Financial literacy → herding behavior	-0.852	0.021	40.485	0.000	Significant
H2	Financial literacy → investment decision	0.370	0.072	5.159	0.000	Significant

H3	Herding behavior → investment decision	0.513	0.068	7.553	0.000	Significant
H4	Financial literacy → investment decision through digital herding behavior	0.437	0.062	7.902	0.000	Significant

Source: Data own research (2026)

Based on Table 12, all hypotheses in this study are statistically significant, with p-values of 0.000 (< 0.05), indicating strong statistical evidence for the relationships among the variables in the model. Financial literacy has a negative effect on herding behavior ($\beta = -0.852$), meaning that higher levels of financial literacy reduce investors' tendency to follow the majority. Furthermore, financial literacy has a positive effect on investment decisions ($\beta = 0.370$), indicating that improved financial understanding enhances the quality of investment decision-making. On the other hand, herding behavior also has a positive effect on investment decisions ($\beta = 0.513$), suggesting that, in certain contexts, following the majority influences investors' decisions. In addition, the indirect effect of financial literacy on investment decisions through digital herding behavior is also significant ($\beta = 0.437$), confirming the presence of a mediating effect in the model. Overall, these findings indicate that financial literacy not only directly influences investment decisions but also indirectly affects them through its impact on herding behavior, thereby strengthening the overall explanatory power of the research model.

a. The Effect of Financial Literacy on Herding Behavior among Investors in East Java Province

The results show that financial literacy has a negative and significant effect on herding behavior among investors in East Java Province, meaning that higher levels of financial literacy reduce investors' tendency to follow majority decisions. This finding is consistent with Prospect Theory which explains that individuals under uncertainty are influenced by psychological biases such as loss aversion and distorted risk perception. Investors with low financial literacy tend to struggle in objectively evaluating information and risk, which increases their reliance on social information as a way to reduce uncertainty, thereby triggering herding behavior. In contrast, higher financial literacy enables investors to understand risk and return more rationally, reducing psychological biases and making them less susceptible to collective decision-making.

In the context of East Java investors, this finding is particularly relevant given that respondents are dominated by young investors with relatively limited investment experience. This condition theoretically increases behavioral bias, yet financial literacy has proven to act as a protective factor in reducing herding tendencies. This indicates that financial literacy functions not only as knowledge but also as a cognitive control mechanism against social pressure in investment decision-making, especially in the digital era where information flows rapidly and massively.

These findings are consistent with previous studies such as Kusuma & Theadora (2024; Puspitarini et al., (2025); Widarno et al. (2024), which suggest that financial literacy improves decision-making quality, as well as Bourri et al. (2019), who found that low financial literacy increases herding behavior. Furthermore, Banerjee (1992) explains that herding occurs when individuals face information constraints, which in this case is reinforced by low financial literacy. This study also contributes by demonstrating that this relationship remains significant in a regional Indonesian context, particularly in East Java with its diverse socio-economic characteristics.

b. The Effect of Financial Literacy on Investment Decisions among Investors in East Java Province

The results indicate that financial literacy has a positive and significant effect on investment decisions among investors in East Java Province, meaning that higher financial literacy leads to better investment decision quality. This finding aligns with Prospect Theory (Kahneman & Tversky, 1979), which states that individuals are prone to decision-making biases such as loss aversion and probability distortion. In this context, financial literacy serves as a cognitive mechanism that helps individuals understand risk and opportunity more objectively, thereby reducing such biases and enabling more rational investment decisions. Investors with higher financial literacy tend to evaluate information more effectively, consider risk proportionally, and select investment instruments aligned with their financial goals.

In East Java, this finding is relevant due to the dominance of young investors with limited experience. While this condition increases the likelihood of decision errors, financial literacy acts as a balancing factor that improves decision quality. This suggests that improving financial literacy among regional investors not

only increases market participation but also enhances decision quality, thereby reducing potential losses caused by irrational decisions, especially in the rapidly growing digital investment environment.

These results are consistent with Hudha (2021); Khairiyati & Krisnawati (2019); Putri & Rahyuda (2017) who emphasize the importance of financial literacy in improving economic decision-making quality. Moreover, Dharma et al. (2024); Murini et al. (2025) show that financial understanding helps investors control behavioral biases. However, some studies argue that financial literacy alone does not always guarantee optimal decisions, as emotional and market conditions also play a role (Kahneman & Tversky, 1979). Thus, this study reinforces existing literature while providing empirical evidence in a regional Indonesian context.

c. The Effect of Herding Behavior on Investment Decisions among Investors in East Java Province

Hasil penelitian menunjukkan bahwa *herding behavior* berpengaruh positif dan signifikan terhadap The results show that herding behavior has a positive and significant effect on investment decisions among investors in East Java Province. This means that the higher the tendency to follow majority behavior, the stronger its influence on investment decision-making. This finding can be explained through Prospect Theory (Kahneman & Tversky, 1979), which states that individuals under uncertainty experience loss aversion and distorted risk perception, leading them to minimize potential losses by following others. In this context, herding behavior functions as a psychological strategy to reduce uncertainty, even though decisions are not necessarily based on rational analysis.

In East Java, this finding is particularly relevant given the dominance of young and relatively inexperienced investors. This condition increases reliance on external information, especially from social media and investment communities, thereby strengthening herding tendencies. This phenomenon shows that in a digital investment ecosystem; investment decisions are influenced not only by individual factors but also by surrounding social dynamics. Although herding may sometimes help investors, in the long run it can reduce decision quality due to a lack of independent analysis.

These findings are consistent with Ahmed & Noreen (2021); Gupta & Shrivastava (2022) who highlight herding as a common phenomenon in financial markets under uncertainty. Quaiocoe & Eleke-Aboagye (2021) also found that herding significantly influences price movements and investment decisions. Bouri et al. (2019) further show that herding becomes stronger in the digital era. However, some argue that herding is not always negative, as it may serve as an adaptive strategy under informational efficiency conditions. Nevertheless, this study finds that in East Java retail investors, herding behavior reflects uncertainty-driven responses rather than rational strategy.

d. The Effect of Financial Literacy on Investment Decisions through Herding Behavior among Investors in East Java Province

The results indicate that financial literacy significantly affects investment decisions through herding behavior, confirming the existence of a mediating mechanism. This finding aligns with Prospect Theory (Kahneman & Tversky, 1979), which explains that individuals under uncertainty are subject to biases such as loss aversion and probability distortion. When financial literacy is low, individuals lack the ability to evaluate risk objectively, making them more dependent on social information and more likely to engage in herding behavior. Conversely, higher financial literacy reduces such biases, decreases herding tendencies, and leads to more rational investment decisions. Thus, herding behavior acts as a psychological mechanism that mediates the relationship between financial literacy and investment decisions.

In East Java, this result is highly relevant as most respondents are young and relatively new investors. This increases uncertainty and reliance on external references, making herding behavior a common phenomenon. However, this study shows that increasing financial literacy reduces such dependence, enabling more independent decision-making. This implies that financial education programs in East Java should not only focus on knowledge enhancement but also on reducing social and psychological biases influenced by digital communities.

These findings are consistent with Arriqoh & Zoraya (2024); Hidayat et al. (2024); Jain et al. (2023), who emphasize the roles of financial literacy and information constraints in shaping herding behavior. This study further contributes by empirically confirming herding behavior as a mediating variable between financial literacy and investment decisions in a regional Indonesian context.

V. Conclusion

Based on the results of the analysis and discussion, it can be concluded that financial literacy plays a significant role in shaping investor behavior and investment decisions in East Java Province. Financial

literacy has a positive direct effect on investment decisions, indicating that higher financial understanding leads to more rational and higher-quality investment decisions. In contrast, financial literacy has a negative effect on herding behavior, meaning that increased literacy reduces investors' tendency to follow majority decisions without independent analysis.

Furthermore, herding behavior has a positive effect on investment decisions, indicating that social and collective factors still significantly influence investor behavior, particularly under uncertainty. The study also confirms that herding behavior mediates the relationship between financial literacy and investment decisions. This demonstrates that investment decisions are shaped not only by cognitive factors (financial literacy) but also by psychological and social factors (herding behavior), consistent with Prospect Theory.

This study provides important implications for regulators, financial institutions, and investors. For regulators such as the Financial Services Authority (OJK), improving financial literacy should be a key strategy to develop rational and independent investors. Financial education programs should focus not only on basic knowledge but also on risk analysis skills and behavioral bias control. For financial industry players, these findings can guide the development of more educational and less purely transactional investment platforms. For investors, this study highlights that optimal investment decisions depend not only on available information but also on the ability to manage social influence and psychological biases.

Theoretically, this study strengthens the relevance of Prospect Theory in explaining investor behavior in emerging markets such as Indonesia. It shows that investment decisions are not fully rational but influenced by psychological biases such as loss aversion and herd tendencies. Moreover, this study integrates financial literacy and herding behavior into a unified conceptual model and confirms the mediating role of herding behavior. Thus, it enriches the behavioral finance literature, particularly in the context of retail investors at the regional level.

This study has several limitations. First, it focuses only on investors in East Java Province, limiting generalizability. Second, the data are self-reported, which may introduce subjective bias. Third, the model includes only financial literacy and herding behavior, while other factors such as emotions, overconfidence, and digital financial behavior were not included.

Future research is recommended to expand the geographical scope for broader generalization. Additional behavioral finance variables such as overconfidence, risk tolerance, and digital financial behavior should also be included. Mixed methods or longitudinal approaches are also suggested to improve analytical depth and reduce bias.

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