

The Role of Herding Behavior as a Moderating Variable on the Influence of Financial Literacy and Risk Tolerance on Students' Investment Decisions

Natasya Puspitarinia*, Puji Endah Purnamasari^b

^{a, b}Management, Economics, State Islamic University of Maulana Malik Ibrahim Malang, East Java, Indonesia

* Corresponding author: 210501110116@student.uin-malang.ac.id

Info Articles

Article history:

Received May 23, 2025

Revised June 12, 2025

Accepted June 15, 2025

Available online June 17, 2025

Keywords: *Financial Literacy ; Risk Tolerance ; Investment Decision; Herding Behavior .*

JEL Classification: D14, D81, G11

Abstract

This study aims to examine the effect of Financial Literacy and Risk Tolerance on investment decisions, with Herding Behavior as a moderating variable. The increase in young investors, among students with limited knowledge and experience, raises questions about the factors that influence their investment decisions. This research employs a quantitative approach with a purposive sampling method targeting students of the Faculty of Economics, UIN Maulana Malik Ibrahim Malang, class of 2021. Respondents were selected based on several criteria collected from distributing questionnaires, followed by data examination employing the Structural Equation Modeling Partial Least Squares (SEM-PLS) method. The results showed that Financial Literacy and Risk Tolerance have a significant positive effect on investment decisions. However, Herding Behavior is not proven to significantly moderate the relationship between Financial Literacy and investment decisions, as well as the relationship between Risk Tolerance and investment decisions.

INTRODUCTION

Over the past few years, the investment sector in Indonesia has grown substantially, especially among younger individuals. According to the Financial Services Authority (OJK, 2024), millennials and Generation Z - the majority of whom are students - make up the majority of retail investors in the Indonesian stock market. This shows that the younger generation is starting to take an interest in *Financial Literacy*, which, according to Rahayu & Meitriana (2023), is the main key to making the right investment decisions, because through a good understanding of investment instruments, personal financial management, and risk and return. By having sufficient knowledge, students can avoid fraudulent investments and make more informed decisions. Furthermore, *Risk Tolerance* also plays an important role because everyone has a unique comfort threshold in facing risks, which will ultimately affect the type of investment they will choose, according to Anang Mahardhika & Asdanimitra (2023). On the other hand, the phenomenon of *Herding Behavior* in the market, where individuals tend to follow the decisions of others, is a significant moderating factor in investment decisions. This is often influenced by social influences, such as public figures or influencers, who can influence students' mindsets in investing Anang Mahardhika & Asdanimitra (2023). This research is very relevant considering the increasing number of students who invest despite their limited knowledge and experience, as well as the rampant phenomenon of fraudulent investments that occur in Indonesia. By taking samples of students from the Faculty of Economics, UIN

Malang who have or are taking courses in investment management, financial management, and risk management, this study is expected to produce new insights regarding how *Herding Behavior* is useful as a moderating factor in the correlation between *Financial Literacy*, risk tolerance, and investment decisions, especially among the younger generation.

Previous research has identified that *Financial Literacy* affects investment decisions. According to research conducted by Adil et al. (2022); Sartika & Humairo (2021); Hidayat & Pamungkas (2022) and Indiraswari & Setiyowati (2023), it shows that people with higher levels of *Financial Literacy* are more likely to make better investment decisions. However, research by Mandagie et al. (2020) found that *Financial Literacy* did not consistently have a significant influence on investment decisions. Similarly, the *Risk Tolerance* factor also influences investment decisions, as shown by research. Andang Mahardhika & Asdanimitra (2023), Mohta & Shunmugasundaram (2024), and Sudirman et al. (2023). However, in other studies, such as Aren & Hamamci (2023), its influence is considered weak, even Ulfa et al. (2023) revealing that risk does not show a significant influence on investment decisions. In addition, *Herding Behavior* is also found to have a significant influence on investment decisions, especially in the context of unstable markets, as explained by Wendy (2021), Duy Bui et al. (2021), Mumtazah & Anwar (2022), and Ramashar et al. (2022). However, some studies show that *Herding Behavior* does not always affect investment decisions positively, as found by Saputra et al. (2022) and Augusta & Yanti (2022).

Although many studies have examined the influence of *Financial Literacy* and Risk Tolerance on investment decisions, as well as the role of *Herding Behavior* as a moderating variable, there is still a gap in research that links these three factors together. Several previous studies have not fully explained how *Herding Behavior* can moderate the relationship between *Financial Literacy*, risk tolerance, and investment decisions. Therefore, this study intends to bridge this gap by concentrating on the role of *Herding Behavior* as a moderating variable in the influence of *Financial Literacy* and risk tolerance on investment decisions. This study will contribute to the development of various theories related to investment decisions.

This study aims to investigate and evaluate how *Financial Literacy* impacts students' investment decisions, as well as how risk tolerance affects their investment choices. The findings of this study are expected to enrich the understanding of the elements that shape investment decisions and support the advancement of *Financial Literacy* and risk management skills among students.

RESEARCH METHODS

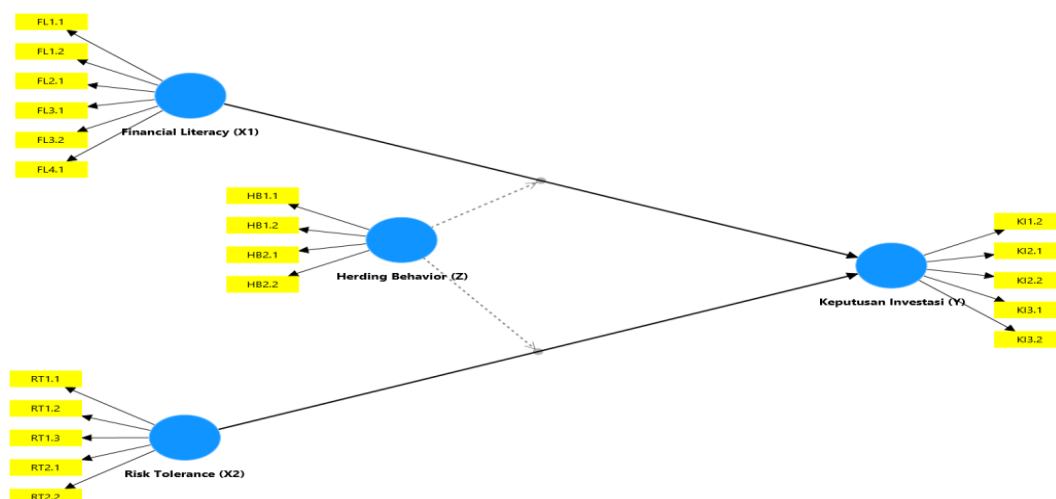
Participants in this study consisted of all students of the Faculty of Economics, State Islamic University of Maulana Malik Ibrahim Malang, class of 2021, who came from the Management and Accounting Study Program with a concentration in finance. The selection of this population was based on the assumption that students with this study background have or are currently studying courses relevant to investment, such as Financial Management, Investment Management, and Risk Management. The sampling process was carried out using *purposive sampling techniques*, namely selecting samples based on the following criteria: (1) students who have completed or are currently taking courses related to investment; (2) individuals who show enthusiasm for investing in the capital market; and (3) willing to be research respondents.

The data collection method used in this study is a survey approach, namely by distributing questionnaires online to respondents who meet the specified criteria. The survey instrument consists of closed questions using a Likert scale, starting from "strongly disagree" (1) to "strongly agree" (5).

BASIC ECONOMETRIC MODELS

The data analysis technique used in this study is PLS-SEM, which was chosen because it is able to handle models with latent variables, a large number of indicators, and is suitable for predictive research. This model is used to test the direct influence of independent variables on dependent variables and to examine the mediating role of the Herding Behavior variable. Before data processing is carried out, a basic PLS model is first built that describes the theoretical relationship between research variables. This basic model is presented as follows.

Figure 1. Basic Model



Based on Figure 1, it is known that the variables *Financial Literacy* (X1) and *Risk Tolerance* (X2) are assumed to have a direct influence on *Investment Decisions* (Y). In addition, both are also assumed to have an indirect influence through *Herding Behavior* (Z) as a moderating variable. Each construct (latent variable) in this model is measured by several indicators indicated by arrows from the indicator to the latent construct, while the relationship between latent variables is indicated by arrows between constructs. Each of these latent variables is measured through several predetermined indicators. The *Financial Literacy* variable (X1) is measured with six indicators (FL1.1 to FL4.1), *Risk Tolerance* (X2) with five indicators (RT1.1 to RT2.2), *Herding Behavior* (Z) with four indicators (HB1.1 to HB2.2), and *Investment Decision* (Y) with six indicators (KI1.2 to KI3.2). This basic model is the initial reference in the structural analysis before the data is processed further.

This model is also used in analyzing the direct influence of independent variables on dependent variables, as well as testing the moderating role of *Herding Behavior*. The regression model used in this study is the moderated regression model, which is formulated as follows:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 (X_1 \cdot Z) + \beta_4 (X_2 \cdot Z) + \varepsilon \dots \dots \dots (1)$$

Where Y = investment decision, X_1 *Financial Literacy*, X_2 = risk tolerance, Z = moderating variable (*Herding Behavior*), $X_1 \cdot Z$ and $X_2 \cdot Z$ = interaction between

independent and moderating variables, β_0 = intercept (constant), $\beta_1, \beta_2, \beta_3, \beta_4$ = regression coefficient, ε = residual error.

The analysis conducted consisted of four stages: (1) Descriptive statistical test to describe the characteristics of respondents; (2) Test the measurement model (outer model) through convergent validity test (outer loading and AVE), discriminant validity, and construct reliability (composite reliability); (3) Test the structural model (inner model) to evaluate the correlation between variables using the path coefficient and R^2 values; and (4) Test the direct influence and moderation influence with the bootstrapping approach to determine the significance of the relationship in the model.

RESULTS AND DISCUSSION

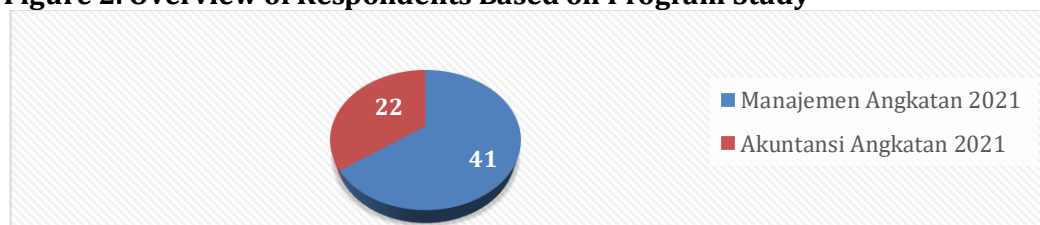
RESULTS

SEM-PLS analysis

SEM-PLS analysis begins by looking at the data description of each variable. Next, an outer model test is carried out to ensure that the indicators used are valid and reliable. After that, an inner model test is run to test the correlation between variables and see their influence through the R-squared value. To test the significance of the influence between variables, bootstrapping is used, which produces t-statistics and p-values. Finally, the results of the analysis are interpreted to draw research conclusions.

Test Descriptive Statistics

Figure 2. Overview of Respondents Based on Program Study



Based on the results of the questionnaire, 63 respondents were obtained, including 41 Management Program Study students and 22 Accounting students, all of whom were class of 2021 at the Faculty of Economics, UIN Maulana Malik Ibrahim Malang.

Table 1. Descriptive Statistics

	1	2	3	4	5	6	7	8	9	10	11
FL1.1	3.937	4,000	1,000	5,000	1,000	5,000	1.246	-0.107	-0.988	0.000	
FL1.2	4.032	4,000	1,000	5,000	1,000	5,000	1.208	0.433	-1.169	0.000	
FL2.1	3.492	4,000	1,000	5,000	1,000	5,000	1.468	-0.971	-0.632	0.000	
FL2.2	3.937	4,000	1,000	5,000	1,000	5,000	1.067	0.716	-0.994	0.000	
FL3.1	3.619	4,000	1,000	5,000	1,000	5,000	1.618	-1.167	-0.715	0.000	
FL3.2	3.571	4,000	1,000	5,000	1,000	5,000	1.519	-0.949	-0.738	0.000	
FL4.1	3.825	5,000	1,000	5,000	1,000	5,000	1.609	-0.805	-0.950	0.000	
FL4.2	3.873	4,000	1,000	5,000	1,000	5,000	1.046	0.596	-0.846	0.000	
RT1.2	3.746	4,000	1,000	5,000	1,000	5,000	1.208	0.144	-0.876	0.000	
RT1.3	3.524	4,000	1,000	5,000	1,000	5,000	1.390	-0.759	-0.650	0.000	
RT2.2	3.984	4,000	1,000	5,000	1,000	5,000	1.120	-0.106	-0.872	0.000	
FL4.2	3.873	4,000	1,000	5,000	1,000	5,000	1.046	0.596	-0.846	0.000	
RT1.2	3.746	4,000	1,000	5,000	1,000	5,000	1.208	0.144	-0.876	0.000	

RT1.3	3,524	4,000	1,000	5,000	1,000	5,000	1,390	-0.759	-0.650	0.000
RT2.2	3,984	4,000	1,000	5,000	1,000	5,000	1,120	-0.106	-0.872	0.000
KI1.1	4,190	4,000	1,000	5,000	1,000	5,000	0,906	2,900	-1.443	0.000
KI1.2	4,063	4,000	1,000	5,000	1,000	5,000	1,037	1,558	-1.268	0.000
KI2.1	3,889	4,000	1,000	5,000	1,000	5,000	1,335	0,484	-1.269	0.000
KI2.2	4,238	4,000	2,000	5,000	2,000	5,000	0,811	-0,639	-0,654	0.000
KI3.1	4,127	4,000	1,000	5,000	1,000	5,000	1,134	1,564	-1,462	0.000
KI3.2	4,000	4,000	1,000	5,000	1,000	5,000	1,168	1,079	-1,285	0.000
HB1.1	3,492	4,000	1,000	5,000	1,000	5,000	1,194	-0,347	-0,698	0.000
HB1.2	2,984	3,000	1,000	5,000	1,000	5,000	1,527	-1,474	-0,027	0.000
HB2.1	3,508	4,000	1,000	5,000	1,000	5,000	1,308	-0,772	-0,541	0.000

Where:

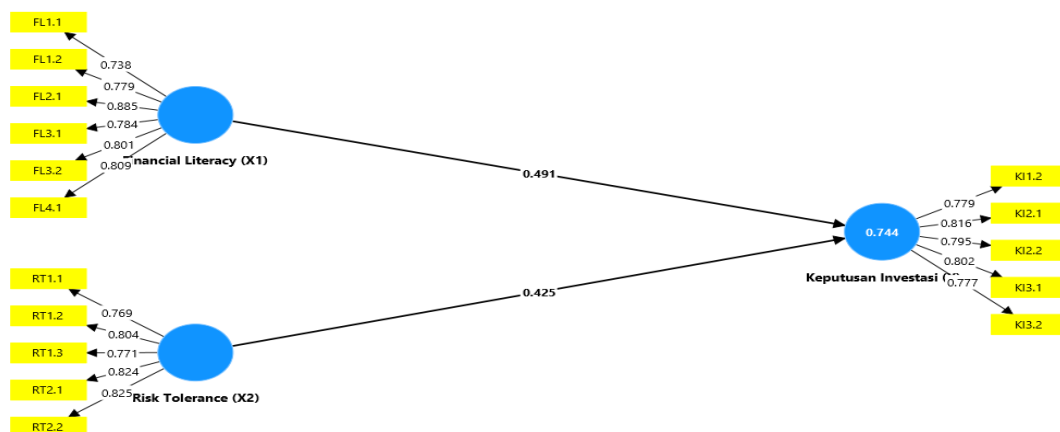
- | | |
|-----------------|------------------------------|
| 1. Indicator | 7. Observed max |
| 2. Mean | 8. Standard deviation |
| 3. Median | 9. Excess kurtosis |
| 4. Scale min | 10. Skewness |
| 5. Scale max | 11. Cramer-von Mises p-value |
| 6. Observed min | |

Based on the results of descriptive statistical tests, it shows that *Financial Literacy* has an average of 3.49-4.03, with the highest score at FL1.2 and the lowest at FL2.1. All indicators show negative skewness, reflecting the tendency of respondents to answer on a high scale, with a standard deviation of 1.046-1.618 indicating a fairly high variation in perception.

Risk Tolerance has an average of 3.14-3.98, with the highest value at RT2.2 and the lowest at RT1.1. Negative skewness and low kurtosis indicate a cautious response and flat data distribution. In investment decisions, the average ranges from 3.88-4.24 with negative skewness and low standard deviation, reflecting a positive and consistent trend in investment decision making.

Meanwhile, *Herding Behavior* shows the lowest average (2.98-3.50), with skewness approaching zero and negative kurtosis, indicating that the tendency to follow other people's investment behavior is moderate to low. All items show a Cramer-von Mises p-value of 0.000, which means that the data is not normally distributed. However, this is not an obstacle because the analysis uses the SEM-PLS method, which does not require a normal distribution.

Figure 2. SEM-PLS Model in Research Without Moderation



The figure shows a model that tests the direct influence of *financial literacy* (X1) and *risk tolerance* (X2) on investment decisions (Y), without involving moderating variables. The structural model formed is:

$$Y = \beta_1 X_1 + \beta_2 X_2 + \varepsilon \dots \dots \dots (1)$$

Where Y = investment decision, X₁ *Financial Literacy*, X₂ = Risk Tolerance, β_1 = Regression coefficient of *Financial Literacy*, β_2 = Regression coefficient of *Risk Tolerance*, ε = residual error.

The results show a path coefficient between *Financial Literacy* and Investment Decisions of 0.491, indicating that increasing students' *Financial Literacy* has a positive impact on the quality of investment decision making. *Financial literacy* is measured through six indicators with *loading factor values* as follows: FL1.1 (0.738), FL1.2 (0.779), FL2.1 (0.885), FL3.1 (0.784), FL3.2 (0.809), and FL4.1 (0.801). All *loading factor values* exceed the threshold of 0.70, indicating good convergent validity.

Meanwhile, *risk tolerance* also positively influences investment decisions with a path coefficient of 0.425. This shows that the greater an individual's tolerance for risk, the higher their tendency to make rational investment decisions. *Risk tolerance* is measured using five indicators with *loading factor values* as follows: RT1.1 (0.769), RT1.2 (0.804), RT1.3 (0.771), RT2.1 (0.824), and RT2.2 (0.823). Each indicator has a *loading factor* exceeding 0.70, indicating that *the risk tolerance construct* is measured validly.

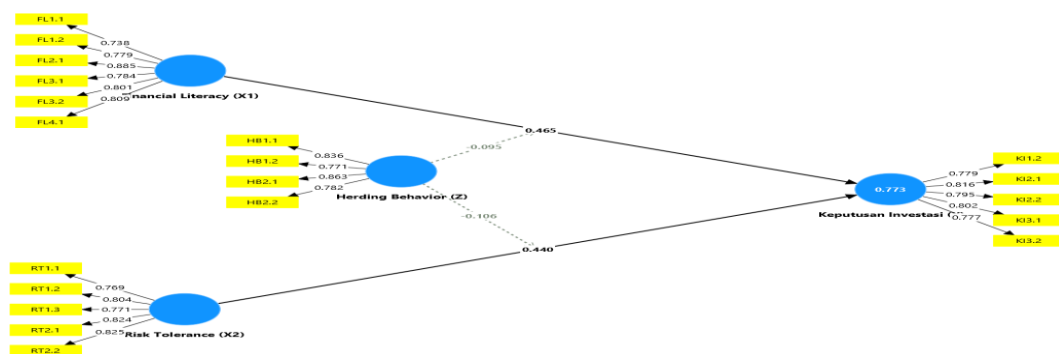
The investment decision variable, as the dependent variable in this model, has an R-squared value of 0.744, which means that 74.4% of the variation in investment decisions can be explained by *financial literacy* and *risk tolerance*, while the rest is influenced by other factors outside the model.

Investment decisions are measured through five indicators, with *loading factor values* as follows: KI1.2 (0.779), KI2.1 (0.816), KI2.2 (0.795), KI3.1 (0.802), and KI3.2 (0.777). All *loading values* are above 0.70, indicating that all indicators are able to represent investment decision variables. These findings are also reinforced by previous studies such as Fauzi et al. (2024), Adil et al. (2022), Sartika & Humairo (2021), Hidayat & Pamungkas (2022), and Indiraswari & Setiyowati (2023) also concluded that investment decisions are significantly influenced by *Financial Literacy*. In addition, Sudirman et al. (2023), and Mohta & Shunmugasundaram (2024) found the same results that *Risk Tolerance* significantly influences investment decisions. So the hypothesis is obtained:

H1: *Financial literacy* has a positive influence on investment decisions among students.

H2: *Risk tolerance* has a positive effect on investment decisions in students.

Figure 3. SEM-PLS Model in Research Using Moderation



The figure shows a model that tests the effect of *herding behavior* (Z) moderating the correlation between *financial literacy* (X1) and *risk tolerance* (X2) on *investment decisions* (Y). The structural equation model with moderating interactions can be written as follows:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 (X_1 \cdot Z) + \beta_4 (X_2 \cdot Z) + \varepsilon \dots \dots \dots (2)$$

Where Y = investment decision, X₁ *Financial Literacy*, X₂ = risk tolerance, Z = moderating variable (*Herding Behavior*), X₁.Z and X₂.Z= interaction between independent and moderating variables, β_0 = intercept (constant), $\beta_1, \beta_2, \beta_3, \beta_4$ = regression coefficient, ε = residual error.

The results show that the path coefficient of *financial literacy* on *investment decisions* is recorded at 0.465. This value indicates that *financial literacy* has a positive effect on *investment decisions*, which means that the higher the level of individual financial literacy, the higher the quality of investment decisions. *Financial literacy* is measured through six indicators with *loading factor values*, namely FL1.1 (0.738), FL1.2 (0.779), FL2.1 (0.885), FL3.1 (0.784), FL3.2 (0.809), and FL4.1 (0.801). All *loading factor values* exceed the minimum limit of 0.70, so it can be concluded that each indicator has good convergent validity in measuring the construct of financial literacy.

Furthermore, the path coefficient of *risk tolerance* on investment decisions is 0.440, which also shows a positive influence. This means that the greater a person's risk tolerance, the higher the individual's tendency to make investment decisions. *The risk tolerance construct* is measured through five indicators with *loading factor values*, namely RT1.1 (0.769), RT1.2 (0.804), RT1.3 (0.771), RT2.1 (0.824), and RT2.2 (0.825). All *loading values* are above 0.70, indicating that the indicator is valid in explaining the risk tolerance construct.

The investment decision variable as a dependent variable has an *R-squared value* of 0.773. This value shows that 77.3% of the variation in investment decisions can be explained by *financial literacy* and *risk tolerance*, including directly or indirectly through the moderation mechanism of *herding behavior*. The remaining 22.7% is explained by other variables outside the model. These variables are measured using six indicators with *loading factor values*, namely KI1.2 (0.779), KI2.1 (0.816), KI2.2 (0.795), KI3.1 (0.802), and KI3.2 (0.777). All *loading values* are above 0.70, which indicates that the instrument used can represent the investment decision variable.

Herding behavior variable (Z) as a moderator variable measured through four indicators with *loading factor values*, namely HB1.1 (0.836), HB1.2 (0.771), HB2.1 (0.863), and HB2.2 (0.782), all of which have *loading factor values* exceeding 0.70. This indicates that *herding behavior* has good measurement quality. However, the results of the path analysis show that the moderating effect of *herding behavior* on the relationship between *financial literacy* and investment decisions is -0.095, and on the relationship between *risk tolerance* and *investment decisions* is -0.106. Both values are negative and small, indicating that the moderating effect is not significant. Thus, it can be concluded that *herding behavior* does not significantly moderate the correlation between *financial literacy* and *risk tolerance* on investment decisions.

These results are in line with the study by [Agusta & Yanti \(2022\)](#) and [Saputra et al. \(2022\)](#), which states that *herding behavior* cannot moderate or influence investment behavior, where individuals follow personal decisions rather than majority decisions. In the context of the respondents of this study, namely, students. Investment decisions are more influenced by personal understanding and risk

profiles, not social pressure. This is different from previous research results, such as Mumtazah & Anwar (2022) and Ramashar et al. (2022), which show that *herding behavior* can moderate investment decisions. So the hypothesis is obtained:

H3: *Herding behavior* moderates the influence of *financial literacy* on investment decisions.

H4: *Herding behavior* moderates the effect of *risk tolerance* on investment decisions.

Measurement Model Test (Outer Model)

Table 2. Convergent Validity

Indicator	Outer Loading s	Information
FL1.1 <- Financial Literacy (X1)	0.738	Valid
FL1.2 <- Financial Literacy (X1)	0.779	Valid
FL2.1 <- Financial Literacy (X1)	0.885	Valid
FL3.1 <- Financial Literacy (X1)	0.784	Valid
FL3.2 <- Financial Literacy (X1)	0.801	Valid
FL4.1 <- Financial Literacy (X1)	0.809	Valid
HB1.1 <- <i>Herding Behavior</i>	0.836	Valid
HB1.2 <- <i>Herding Behavior</i>	0.771	Valid
HB2.1 <- <i>Herding Behavior</i>	0.863	Valid
HB2.2 <- <i>Herding Behavior</i>	0.782	Valid
KI1.2 <- Investment Decision (Y)	0.779	Valid
KI2.1 <- Investment Decision (Y)	0.816	Valid
KI2.2 <- Investment Decision (Y)	0.795	Valid
KI3.1 <- Investment Decision (Y)	0.802	Valid
KI3.2 <- Investment Decision (Y)	0.777	Valid
RT1.1 <- <i>Risk Tolerance</i> (x2)	0.769	Valid
RT1.2 <- <i>Risk Tolerance</i> (x2)	0.804	Valid
RT1.3 <- <i>Risk Tolerance</i> (x2)	0.771	Valid
RT2.1 <- <i>Risk Tolerance</i> (x2)	0.824	Valid
RT2.2 <- <i>Risk Tolerance</i> (x2)	0.825	Valid
<i>Herding Behavior</i> x <i>Risk Tolerance</i> (x2) ->	1,000	Valid
<i>Herding Behavior</i> x <i>Risk Tolerance</i> (x2)		

The results of the convergent validity test through the *outer loading value* show that all indicators in each construct have values above 0.70. This value meets the minimum criteria for convergent validity, which means that each indicator can adequately represent its latent variables. Thus, all indicators are declared valid and suitable for use in further model analysis.

Table 3 Discriminant Validity

1	2	3	4	5	6	7	8
FL1.1	0.738	0.606	0.536	0.611	-0.200	-0.083	Valid
FL1.2	0.779	0.629	0.624	0.615	-0.418	-0.146	Valid
FL2.1	0.885	0.702	0.779	0.632	-0.426	-0.167	Valid
FL3.1	0.784	0.642	0.641	0.511	-0.313	-0.014	Valid
FL3.2	0.801	0.661	0.719	0.716	-0.370	-0.174	Valid
FL4.1	0.809	0.600	0.595	0.628	-0.277	-0.004	Valid
HB1.1	0.621	0.836	0.589	0.700	-0.309	-0.302	Valid
HB1.2	0.682	0.771	0.536	0.568	-0.200	-0.072	Valid
HB2.1	0.670	0.863	0.613	0.635	-0.333	-0.187	Valid

HB2.2	0.637	0.782	0.611	0.627	-0.283	-0.141	Valid
KI1.2	0.649	0.583	0.779	0.619	-0.307	-0.129	Valid
KI2.2	0.629	0.545	0.795	0.706	-0.190	-0.148	Valid
KI3.1	0.685	0.611	0.802	0.595	-0.527	-0.378	Valid
KI3.2	0.673	0.558	0.777	0.607	-0.257	-0.278	Valid
RT1.1	0.623	0.696	0.580	0.769	0.033	-0.052	Valid
RT1.2	0.681	0.626	0.722	0.804	-0.251	-0.278	Valid
RT1.3	0.627	0.601	0.630	0.771	-0.198	-0.239	Valid
RT2.1	0.557	0.606	0.607	0.824	-0.064	-0.180	Valid
RT2.2	0.591	0.588	0.655	0.825	-0.062	-0.260	Valid
7	-0.128	-0.218	-0.330	-0.259	0.662	1,000	Valid

Where:

1. Indicator
2. *Financial Literacy* (X1)
3. *Herding Behavior* (Z)
4. Investment Decision (Y)
5. *Risk Tolerance* (X2)
6. *Herding Behavior* (Z) x *Financial Literacy* (X1)
7. *Herding Behavior* (Z) x *Risk Tolerance* (X2)
8. Information

According to the results of the discriminant validity test through the cross-loading value, all indicators have the highest loading value on their respective variables compared to other variables. This shows that each indicator is able to measure the intended variable accurately, so it can be concluded that the discriminant validity test has been met.

Table 4 Reliability

Indicator	Cronbach's alpha	Composite reliability (rho_c)
<i>Financial Literacy</i> (X1)	0.888	0.914
<i>Risk Tolerance</i> (X2)	0.858	0.898
<i>Herding Behavior</i> (Z)	0.829	0.887
Investment Decision (Y)	0.853	0.895

Based on the reliability test of Cronbach's Alpha values for each variable in sequence, namely 0.888, 0.858, 0.829, and 0.853. These values are above 0.7, so it can be concluded that the instrument in this study meets the reliability requirements and can be used in further analysis.

Structural Model Test (Inner Model)

Table 5 R-Square

Indicator	R-square	R-square adjusted
Investment Decision (Y)	0.773	0.753

Based on the inner model test, the R-squared value for the investment decision variable (Y) is 0.773. This shows that even after taking into account many independent variables, this model still has a strong ability to explain the Investment Decision variable.

Direct Effect Test

Table 6 Path Significance

Indicator	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values	Caption
<i>Financial Literacy</i> (X1) -> Investment Decision (Y)	0.465	0.456	0.175	2,650	0.008	(Accepted)
<i>Risk Tolerance</i> (X2) -> Investment Decision (Y)	0.440	0.449	0.136	3.239	0.001	(Accepted)
<i>Herding Behavior</i> (Z) x <i>Financial Literacy</i> (X1) -> Investment Decision (Y)	-0.095	-0.121	0.191	0.497	0.620	(Rejected)
<i>Herding Behavior</i> (Z) x <i>Risk Tolerance</i> (X2) -> Investment Decision (Y)	-0.106	-0.068	0.155	0.681	0.496	(Rejected)

The test results show that the *Financial Literacy* variable (X1) significantly influences Investment Decisions (Y), which has a p-value of 0.008. Given that the p-value is below the significance level of 0.05, it can be concluded that *Financial Literacy* significantly influences investment decisions. The second test aims to see the effect of *Risk Tolerance* (X2) on Investment Decisions (Y) and produces a p-value of 0.001, indicating that *Risk Tolerance* significantly influences investment decisions because it is below the significance level of 0.05. Furthermore, the third test aims to determine the effect of *Herding Behavior* (Z) in moderating the relationship between *Financial Literacy* (X1) and Investment Decisions (Y). The results show a p-value of 0.620 exceeding 0.05, meaning that *Herding Behavior* is unable to moderate. Finally, the fourth test was conducted to determine the moderating effect of *Herding Behavior* (Z) on the relationship between *Risk Tolerance* (X2) and Investment Decisions (Y) with a p-value of 0.496, which exceeds 0.05, meaning that *Herding Behavior* does not act as a moderator between *Risk Tolerance* and Investment Decisions.

DISCUSSION

Positive Influence of *Financial Literacy* on Investment Decisions Accepted

The initial test results show that the *Financial Literacy* variable (X1) has a positive and significant influence on investment decisions (Y). This result is in line with the view of Fauzi et al. (2024) that *Financial Literacy* is the knowledge that investors must have about financial products and basic financial concepts that guide them in making investment decisions, in order to achieve prosperity in the future. For students, the ability to manage finances wisely will help align income and expenses, thereby preventing wrong financial decisions, including in terms of investment.

This study is in line with the results presented by Rahayu & Meitriana (2023), which reveal that *Financial Literacy* in students includes knowledge about personal finance, credit, savings, and investment, which significantly influences investment decisions. Students who understand the importance of financial management will be increasingly able to allocate financial resources efficiently, including in determining

the category of investment instruments that are in line with their risk profile and financial goals. This finding is supported by previous studies by [Adil et al. \(2022\)](#) ; [Sartika & Humairo \(2021\)](#); [Hidayat & Pamungkas \(2022\)](#), and [Indiraswari & Setiyowati \(2023\)](#), which concludes that investment decisions are significantly influenced by *Financial Literacy*. Theoretically, these results strengthen the Expected Utility Theory, where rational individuals will choose investment decisions according to the information and expectations of the greatest profit. By having good *Financial Literacy*, students are able to analyze potential risks and benefits thoroughly, so that they can make the right and knowledgeable investment decisions. Thus, the results of this study confirm the importance of strengthening *Financial Literacy* among students so that they can make wise and financially responsible investment decisions.

The Positive Influence of Risk Tolerance on Investment Decisions

The results of the second hypothesis test show that *the Risk Tolerance variable* positively and significantly influences Investment Decisions. The findings indicate that students who have the ability to accept risks tend to be more daring in making investments, even though the investment has a high level of uncertainty. Individuals with a high level of *Risk Tolerance* tend to understand the potential for long-term profits and are ready to accept the possibility of losses in the investment process. This study is supported by research by [Andang Mahardhika & Asdanimitra \(2023\)](#), [Mohta & Shunmugasundaram \(2024\)](#), and [Sudirman et al. \(2023\)](#), who also found that *Risk Tolerance* significantly influences investment decisions.

When connected to the Expected Utility Theory, which explains that individuals make decisions in line with the results that provide the greatest utility (satisfaction) according to their risk preferences. In the context of students, especially in the Faculty of Economics, risk tolerance can reflect the level of readiness and maturity in facing market uncertainty, as well as the courage to make rational and measured investment decisions. This leads to the conclusion that *Risk Tolerance* is an important factor that needs to be developed when forming wise investment behavior, especially for students who are prospective investors in the future.

Herding Behavior Does Not Moderate the Effect of Financial Literacy on Investment Decisions

The findings from the hypothesis testing show that *Herding Behavior* does not affect the relationship between *Financial Literacy* and Investment Decisions. The tendency of individuals to imitate group behavior does not strengthen or reduce the correlation between *Financial Literacy* and investment decisions. This rejection can be explained by the nature of both variables. *Financial Literacy* is rational knowledge gained through learning and experience, which enables individuals to make logical and informed decisions. In contrast, *Herding Behavior* is an emotional response that arises due to social pressure, often without adequate information. Individuals with high levels of *Financial Literacy* tend to be independent and are not easily influenced by collective behavior.

The findings of this study are in line with the study by [Saputra et al. \(2022\)](#), which shows that *Herding Behavior* does not act as a moderating factor in the correlation between *Financial Literacy* and investment decisions. This confirms that a strong financial understanding acts as a shield against social influence in the investment decision-making process. In the context of this study, the majority of respondents were students of the Faculty of Economics, UIN Maulana Malik Ibrahim Malang, who had received formal education related to finance through courses such

as Investment Management, Financial Management, and Risk Management, and had access to direct practice through the Investment Gallery. With these provisions, students rely more on personal analysis than majority opinion in making investment decisions, and this finding strengthens that *Financial Literacy* plays an important role in influencing investment decisions, while *Herding Behavior* did not show a significant moderating effect.

Herding Behavior Does Not Moderate the Effect of Risk Tolerance on Investment Decisions

The results of the hypothesis test show that the interaction between *Herding Behavior* and *Risk Tolerance* on investment decisions is not significant. This means that the tendency of individuals to follow group behavior does not strengthen or weaken the correlation between *Risk Tolerance* and investment decisions. Centering students make decisions based on understanding and acceptance of the potential for investment losses, so that the decisions taken tend to be rational and independent. If we look at the previous results, the correlation between *Risk Tolerance* and investment decisions is already quite strong directly without requiring additional influence from *Herding Behavior*. As seen in the study by [Agusta & Yanti \(2022\)](#), herding does not influence investment decisions. If *Herding Behavior* is tested as an independent variable, its influence on investment decisions is likely to be more significant. This is supported by the study by [Ramashar et al. \(2022\)](#), which reveals that in conditions of uncertainty, individuals tend to follow the majority's investment decisions as a form of psychological response to the surrounding environment. However, as a moderating variable in the correlation between *Risk Tolerance* and investment decisions, *Herding Behavior* does not show a significant effect.

This research is also supported by several previous research results, such as [Andang Mahardhika & Asdanimitra \(2023\)](#), [Mohta & Shunmugasundaram \(2024\)](#), and [Sudirman et al. \(2023\)](#), who found that *Risk Tolerance* positively and significantly influences investment decisions. Therefore, it leads to the conclusion that *Risk Tolerance* does not have to go through *Herding Behavior* to influence investment decisions.

CONCLUSION

The results of this study show that *Financial Literacy* and Risk Tolerance have a good and meaningful influence on students' Investment Decisions. Students' investment decisions are more influenced by the individual's ability to understand finance and readiness to face risks, compared to the tendency to follow group behavior. *Herding Behavior* is unable to moderate *Financial Literacy* or *Risk Tolerance*. Based on these results, it is recommended that students continue to improve *their Financial Literacy* and ability to manage investment risks independently, and optimization of the function of the Investment Gallery as a medium for practice and education must continue to be carried out. Further researchers are advised to expand the scope of respondents and consider other variables such as financial behavior and other emotional intelligence in order to obtain more comprehensive results.

REFEERENCES

- Adil , M., Singh, Y., & Ansari, M. S. (2022). How does financial literacy moderate the association between behavioral biases and investment decisions? *Asian Journal of Accounting Research*, 7 (1), 17–30. <https://doi.org/10.1108/AJAR-09-2020-0086>

- Agusta , CM, & Yanti, HB (2022). THE EFFECT OF RISK PERCEPTION AND HERDING ON INVESTMENT DECISION MAKING. *Trisakti Journal of Economics* , 2 No. 2. <https://doi.org/10.25105/jet.v2i2.14443>
- Aren , S., & Hamamci, H.N. (2023). Evaluation of investment preference with fantasy, emotional intelligence, confidence, trust, financial literacy, and risk preference. *KYBERNETES* , 52 , pp. 6203-6231. <https://doi.org/10.1108/k-01-2022-0014>
- Duy Bui , L., Chi Le, T., Ngoc Quang, A.H., & Wong, W.K. (2021). Determinants of the possibilities by investors' risk-taking: empirical evidence from Vietnam. *Cogent Economics and Finance*, 9 (1). <https://doi.org/10.1080/23322039.2021.1917106>
- Fauzi , MH, Putri, SD, Fadhilah, RA, Kurniati, M., Pebriani, AR, Putra, MRE, & Rozak, RWA (2024). Analysis of Financial Literacy Level in Personal Financial Management of Students. *Tax Accounting and Digital Economic Policy*, 1 (2), 37–50. <https://doi.org/10.61132/apke.v1i2.74>
- Hidayat , VE, & Pamungkas, AS (2022). THE EFFECT OF FINANCIAL LITERACY, RISK PERCEPTION, AND RISK TOLERANCE ON INVESTMENT DECISIONS IN STOCKS. *Journal of Managerial and Entrepreneurship*, 04, No. 03. <https://pdfs.semanticscholar.org/6c2e/f91d63f36a219967b5adc70ea495a55bf59d.pdf>
- Indiraswari , SD, & Setiyowati, SW (2023). Moderation of Financial Attitude on Financial Literacy and Risk Tolerance on Investment Decisions. *Journal of Accounting & Taxation Research (JRAP)*, 10 (2), 150–160. <https://doi.org/10.35838/jrap.2023.010.02.13>
- Mahardhika , MD, & Asandimitra, N. (2023). The influence of overconfidence, risk tolerance, return, financial literacy, and financial technology on investment decisions. *Journal of Management Science*, 11(3), 602–613. <https://doi.org/10.26740/jim.vn.p602-613>
- Mandagie , YRO, Febrianti, M., & Fujianti, L. (2020). ANALYSIS OF THE EFFECT OF FINANCIAL LITERACY, INVESTMENT EXPERIENCE, AND RISK TOLERANCE ON INVESTMENT DECISIONS (Case Study of Accounting Students of Pancasila University). *RELEVANT: Journal of Accounting Research*, 1 (1), 35–47. <https://doi.org/10.35814/relevan.v1i1.1814>
- Mohta , A., & Shunmugasundaram, V. (2024). Moderating role of millennials' financial literacy on the relationship between risk tolerance and risky investment behavior: evidence from India. *International Journal of Social Economics*, 51 (3), 422–440. <https://doi.org/10.1108/IJSE-12-2022-0812>
- Mumtazah, MR, & Anwar, M. (2022). Analysis of the influence of herding behavior in moderating stock investment decisions on UPN Veteran East Java students. *Fair Value: Scientific Journal of Accounting and Finance*, 5 (1), 115–123. <https://doi.org/10.32670/fairvalue.v5i1.2012>
- Nur Aini, NS, & Lutfi, L. (2019). The influence of risk perception, risk tolerance, overconfidence, and loss aversion towards investment decision making. *Journal of Economics, Business, & Accountancy Ventures*, 21 (3), 401–413. <https://doi.org/10.14414/jebav.v21i3.1663>

- Financial Services Authority (OJK) . (2024). *SP OJK and BPS Announce Results of the 2024 National Survey of Financial Literacy and Inclusion* .
<https://www.ojk.go.id/id/berita-dan-kegiatan/siaran-pers/Pages/OJK-dan-BPS-Umumkan-Hasil-Survei-Nasional-Literasi-dan-Inklusi-Kuangan-Tahun-2024.aspx>
- Panji, M., & Wafiroh, NL (2022). Analysis of the Influence of Financial Literacy and Social Media Stock Education on Investment Decisions (Case Study on Students in Malang City). *Journal of Socioeconomics and Humanities*, 8, 200–206.
<https://doi.org/10.29303/jseh.v8i2.57>
- Rahayu , NKSD, & Meitriana, MA (2023). The Influence of Financial Literacy and Financial Attitudes on Financial Management Behavior of Students of the Undiksha Economic Education Study Program. *Ekuitas: Journal of Economic Education*, 11 (2), 219–225. <https://doi.org/10.23887/ekuitas.v11i2.65999>
- Ramashar, W., Hanifa Sandri, S., Hidayat, R., Accounting Study, P., Economics and Business, F., Muhammadiyah Riau, U., & Banking Finance Study, P. (2022). Psychological Factors and Investment Decisions of Students in the Capital Market. *Journal of Accounting and Finance Research*, 10 (1), 93–102.
<https://doi.org/10.17509/jrak.v10i1.36709>
- Saputra, SE, Natassia, R., & Utami, HY (2022). Moderation of the Relationship between Financial Literacy and Investment Decisions on the Role of Herding Behavior for Beginner Investors. *Journal of Business Economics Informatics*, 4, 257–262.
<https://doi.org/10.37034/infeb.v4i4.179>
- Sartika, F., & Humairo, N. (2021). Financial Literacy and Sociodemographic Factors on Investment Decisions through Behavioral Bias. *Scientific Journal of Management and Business*, 22 (2), 164–177. <https://doi.org/10.30596/jimb.v22i2.7766>
- Sudirman , WFR, Winario, M., Priyatno, AM, & Assyifa, Z. (2023). Risk Tolerance: Heuristic Bias Towards Investment Decision Making. *Journal of Theory and Applied Management*, 16 (2), 266–279.
<https://doi.org/10.20473/jmtt.v16i2.47471>
- Ulfa, FN, Supramono, S., & Sulistyawati, AI (2023). Influence of Financial Literacy, Risk Tolerance, Financial Efficacy on Investment Decisions and Financial Management Behavior. *Contingency: Scientific Journal of Management*, 11 (2).
<https://doi.org/10.56457/jimk.v11i2.449>
- Wendy. (2021). The Interaction Effect of Financial Literacy in Investment Decisions: Testing Psychological Biases. *Journal of Business Economics and Entrepreneurship*, 10 (1), 36. <https://doi.org/10.26418/jebik.v10i1.43403>