# Financial Literacy and Financial Behavior on Investment Decisions: Lampung Investors

lst Winda Rika Lestari departemen Manajemen Institut Informatika dan Bisnis Daramajaya Bandar Lampung, Indonesia windarikalestari@darmajaya.ac.id or 0000-0001-7377-6035 <sup>2nd</sup> Yosua Theo Herlia Departemen Manajemen Institut Informatika dan Bisnis Darmajaya Bandar Lampung, Indonesia yosuatheo11@gmail.com 3rd Lukmanul Hakim departemen Manajemen Institut Informatika dan Bisnis Daramajaya Bandar Lampung, Indonesia lukmanulhakim@darmajaya.ac.id

Abstract: This study aims to analyze financial literacy and financial behavioral factors that affect investment decisions for investors in Lampung. This study will focus on investors in Lampung with more than one year of investment experience. The data used is primary data collected through online questionnaires. While the method used is a quantitative method with multiple linear regression approach. This study uses the Investment Decision variable as the dependent variable, while the independent variable consists of Financial Literacy, Herding, and Risk Tolerance. The results of this study indicate that financial literacy, risk tolerance, and herding have a significant effect on investment decisions. This means that investors tend to accept information and follow the decisions of others, where the greater the financial literacy, herding, and risk tolerance factors, the better the investor's decisions will be.

Keywords: Investment Decision, Financial Literacy, Risk Tolerance, Herding

## I. INTRODUCTION

Investment activity is one form of investment in company assets in the long term with the hope of making a profit. Financial decision making in investing has been widely recognized as one of the important factors in finance and financial well-being. Thus, identifying the factors that are significantly related to financial decisions is one of the important issues to be used as a basis for individuals to make financial decisions.

On the other hand, investment is currently being favored by young people in Indonesia, due to the large number of successful stock influencers by investing. Based on official news from the Financial Services Authority (2021), young people's interest in the investment world continues to increase, one of the evidences of which can be seen from the increase in the number of capital market investors, which are dominated by millennials and generation Z. The Financial Services Authority (OJK), Hoesen, stated that the number of investors in the capital market currently has reached more than 6 million as seen from the Single Investor Identification (SID) data. Of which more than 58.5% are investors under the age of 30 [1].

The evolution of behavioral finance has brought about a revolution in the financial industry. Investors often do not act rationally in making decisions related to investment. They have certain weaknesses such as cognitive and

emotional which take a dominant role in making individual investment decisions. In an efficient market, investors are considered as rational, impartial and consistent actors, who make optimal investment decisions, regardless of their soul or emotions [2]. However, psychological research shows that investors as decision makers are not always rational [3]They have a behavioral bias in terms of making investment decisions.

The financial crisis that occurred and the inability to manage finances made it clear that we need to know how important financial literacy is in this era of globalization. A person's cognitive abilities and knowledge reflect their financial literacy. In a news letter published by the Financial Services Authority on the results of a survey conducted in 34 provinces and 67 cities/districts with a total of 12,773 respondents, it shows a financial literacy rate of 38.03% [1]. These results indicate that the growth in the level of financial literacy in Indonesia is still at a low growth rate compared to other countries. In relation to investment, financial literacy helps individuals to weigh their financial capabilities with the risks that will be accepted. High financial literacy can make someone wise and clever in managing their assets. Where good financial literacy skills will help someone in determining investment products that are in accordance with financial capabilities and risks that are ready to be accepted.

Uncertainty in carrying out investment activities will also lead to different decision-making behavior for each investor, including investors who are currently investing massively. This relates to the risk tolerance for each individual. Risk tolerance relates to the willingness to accept investment risk. Risk-tolerant investors tend to invest with less risk, whereas risk-averse individuals are more likely to have a lower proportion of assets allocated in risky assets. The degree of tolerance of each investor on investment risk may vary. This is supported by the research of [4] which states that risk tolerance has a positive effect on investment decisions, meaning that the higher a person's risk tolerance, the bolder the investment decisions he will take. Basically the characteristics of investment instruments are high risk high return [5]. This is evidenced by the respondent who is a risk taker type of investor, where respondents dare to accept high risks to get high returns as well.

In addition to risk tolerance, herding is also a factor that influences individuals in making investment decisions. Regarding its influence on investment decisions, the relationship has been proven by [6][6], which has proven that herding has a positive effect on investment decisions, meaning that the higher a person's herding to risk, the higher the investment decision to be taken. This is supported by [7] investment decisions are influenced by herding. The purpose of this study is to analyze several factors that influence investment decisions of novice investors in Lampung.

## II. LITERATURE REVIEW

## A. Behavioral Financial Theory

Behavioral finance theory is the study of human psychology and the rationality of making financial decisions which reduces to traditional assumptions about maximizing expected utility in efficient markets [8]. The behavioral financial theory developed by [9] aims to better understand and explain the impact of emotional and cognitive errors on investors in making investment decisions. Behavioral finance is an attempt to avoid the bias experienced by investors when making investment decisions. Behavioral finance is based on various assumptions and ideas of behavioral economics. Traditional financial theories such as the expected utility theory and the efficient market hypothesis do not see how real investors are. They assume all investors are rational people and discuss the way rational investors should behave. The theory of behavioral finance explains how in real life an investor and market anomalies that arise from this behavior are problems that must be addressed by behavioral finance.

## A. Investation decision.

Investment decision is the process of making a decision about a particular problem or problem by choosing from two or more investment options or changing some inputs into outputs [10]. According to [11], investment decisions are policies of two or more investment alternatives. When making investment decisions, a person will consider many things, such as the value of an asset, the benefits it will receive in the future, the level of risk, and others. Meanwhile, [12] explains that one's investment decisions are known from two angles, namely the extent to which decisions can optimize one's assets (economic) and investment decisions based on investors' psychological aspects (Behavioral motivation).

Several indicators that can be used in assessing investment decisions according to [13], namely:

- a. Confidence in investing
- b. Individual consumption rate
- c. Motivation from the social environment
- d. Availability of funds
- e. Ability to manage funds.

## B. Financial Literacy.

According to [14], financial literacy is a person's cognitive ability to make financial decisions by looking at the time period and choosing the best time period. Financial literacy is an investment in humans to be able to have intelligence in order to gain prosperity. Financial Literacy

includes insights, beliefs, and skills that influence behavior and attitudes in order to improve the quality of making decisions and managing finances to obtain prosperity [1]. Financial literacy aims so that a person has the ability to choose, read, analyze and understand the choice of financial products.

According to [15]'s research, in 2018 the level of individual financial literacy can be measured using several indicators, namely:

- a. Understanding of basic financial knowledge
- b. Know or have knowledge about investment
- c. Knowledge of savings and credit financial products
- d. Have basic knowledge of insurance or guarantees.

Research result [16] shows that partially financial literacy has a significant effect on investment decisions in students. These results are in line with the research of [4]. Then, in behavior finance theory, it has been explained that investment decisions are also related to information held by individuals. In this case, good financial literacy stems from a lot of information that builds individual insight in managing and allocating their finances [17]. As a result, financial literacy affects one's investment decisions.

 $H_1$ : Financial literacy has a positive effect on investors' investment decisions.

#### C. Risk tolerance

Risk tolerance is the application of financial management science related to individual psychology in responding and making decisions on a financial condition [18]. Risk tolerance greatly affects various types of decisions because all people who have money will definitely be faced with all kinds of possibilities that occur with their finances in all financial activities, this risk tolerance is seen from the amount of risk that makes a financial stakeholder or investor feel confident about the decision to do something. investation.

As for measuring a person's level of risk tolerance, indicators are used that refer to research conducted by [19], namely:

- a. Options in granting loans without collateral
- b. Use of income for investment that is chancy
- c. Purchasing assets for businesses without consideration
- d. Invest in activities that provide large returns.

Research conducted by [16], found that risk tolerance had a positive effect on investment decisions. This means that the higher the investor's interest in risk, the greater the level of investment made. In fact, risk tolerance also has a positive and significant influence on investment decisions [7].

 $H_2$ : Risk tolerance has a positive effect on the decision to invest in shares of investors.

# D. Herding behavior

Herding behavior can be identified as the tendency of investor behavior to follow the actions of other people or other investors [20]. In addition, according to [21], Herding is an irrational investor behavior with a tendency to follow the decisions of other investors in investing. These irrational investors will make the same decisions as other people or groups of people regarding the selection of investment types or even buying and selling investment instruments.

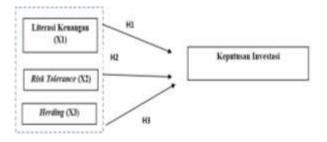
To measure a person's herding tendency, several indicators are used. The indicators used refer to research that has been conducted by [22], namely:

- a. Decision making based on majority vote.
- b. Lack of decisions made individually.

Research conducted by [23] found a significant effect of herding behavior on investment decision making on investors. Herding is also explained by behavior finance theory which states that herding behavior comes from emotions and interest in the decisions of other investors which can lead to irrational behavior [7].

 $H_3$ : Herding has a positive effect on investment decisions on investors

An explanation of the development of the research hypothesis can be illustrated through the conceptual framework as follows:



#### III. METHODOLOGY

This study aims to determine the effect of financial literacy, risk tolerance, and herding on investors' investment decisions in Lampung with a causal conclusive research model. This type of research is quantitative research. Data is primary data obtained through questionnaires and distributed using Google Form. The population of this research is investors in Lampung. The sampling technique used is a purposive sample with the criteria of respondents being investors in Lampung and having invested at least 1 year. Then used sampling with the unknown population method developed by Shannon (Pielou E.C., 1966). This study took a sample of 99. The measurement scale using a Likert scale used for each variable with the largest score is 7 and the lowest score is 1.

## IV. RESULTS AND DISCUSSION

The characteristics of respondents who have filled out this research questionnaire are based on age, the proportion of respondents is dominated by respondents aged between 17 and 22 years with a percentage of 62%. Then, followed by respondents aged 23 to 27 years with a percentage of 27%. While respondents aged more than 28 years have a percentage of no more than 11%. Characteristics by gender. Respondents of male investors are 47 people or 47% and female investor respondents are 52 people or 53%. Characteristics of respondents based on income. Respondents are dominated by respondents with incomes ranging from Rp. 1,000,000 to Rp. 3,000,000. However, the percentage of respondents with a high income or between IDR 3,000,000 to IDR 5,000,000 also dominates the respondents with a percentage of 25%. However, if we look further from the range of income, it can be said that respondents with low income or less than IDR 1,000,000 are also involved in investment or at least know about investment.

The results of the validity test of this study indicate that the items used are valid because all items used in this study get r arithmetic with a value greater than the value of r table. The results of the reliability test of this study obtained the results of Cronbach alpha with a value of > 0.70 so it can be said to be reliable. The normality test of the data was carried out using the One Sample Kolmogorov-Smirnov Test. Where the level of significance used is = 0.05. The result is normally distributed data with an Asymp.Sig (2-tailed) value of 0.189 or greater than a significance level of 0.05 (5%).

**Hypothesis Testing Results** 

TABLE 1. COEFFICIENT OF DETERMINATION OF R-SQUARE

	Score	
Adjusted R- Square	0,451	

Based on table 1 above, it is found that the coefficient of determination is 0.451, this value is obtained from the Adjusted R-Square value. That is, 45.1% of the investment decision variables can be explained by financial literacy, herding and risk tolerance variables, while 54.6% is explained by other variables not examined in this research model.

TABLE 2. REGRESSION TEST RESULTS

	12	Unstan	dardized iciests	Standardized Coefficients		
Model		В	Std. Error	Beta	t	Sig.
1	(Constant)	9,574	6,562		1,459	0,148
	Risk Tolerance	0,603	0,114	0,421	5,293	0,000
	Herding	0,283	0,083	0,257	3,402	0,001
	Literasi Keuangan	0,374	0,094	0,314	3,974	0,000

Based on the results of the tests that have been carried out, the models obtained in this study are as follows:

Table 2 describes the Financial Literacy variable (X1) that has an effect on investment decisions for investors in Lampung, which is indicated by a significance of 0.000 which is smaller than 5%. This means that the better the financial literacy, the better the level of an investor's investment decisions. High financial literacy will organize and allocate finances appropriately so as to make investment decisions with a clear direction. This shows that with high financial literacy, someone can manage their assets both in the short and long term and help someone to avoid financial fraud. This is in line with behavioral finance theory which explains that the better the level of

financial literacy a person has, the better they are at managing personal finances and better understanding of conditions and cognitive errors because someone can make irrational decisions. This study is consistent and in accordance with the research conducted [24].

Risk tolerance greatly affects various types of decisions because all people who have money will definitely be faced with all kinds of possibilities that occur with their finances in all financial activities. Likewise, if it is examined more deeply in behavioral finance theory, one must have confidence in their investment planning and certainly have comparable risk tolerance. In fact, risk tolerance also has a positive and significant influence on investment decisions [22]. As for measuring a person's level of risk tolerance, indicators are used that refer to research conducted by [19], namely: choices in providing unsecured loans, using income for chancy investments, purchasing assets for businesses without consideration and investment in activities that provide large returns.

The second hypothesis is that the risk tolerance variable has a significant positive effect on investment decisions for investors in Lampung. This is indicated by a significance value lower than 5%. This means that the higher a person's risk tolerance, the bolder the investment decisions he will take. Investors in Lampung are willing to use their income to invest which is considered profitable, even if it is risky. This study is consistent and in accordance with the research conducted [4].

Herding can be identified as a tendency for investor behavior to follow the actions of other people or other investors [20]. In addition, according to Aristiwati and Hidayatullah (2021), herding is irrational investor behavior with a tendency to follow other investors' decisions in investing. These irrational investors will make the same decisions as other people or groups of people regarding the selection of investment types or even buying and selling investment instruments. Meanwhile, if it is associated with the existence of behavioral finance theory, herding behavior describes investors who tend to invest without conducting fundamental analysis first and of course has a positive relationship to one's investment decisions [21]. The indicators used refer to research that has been conducted by [22], namely: decision making based on majority votes and a lack of decisions made individually.

The third hypothesis is that the herding variable has a significant positive effect on investment decisions for investors in Lampung. This is indicated by a significance level below 5%. Investors in Lampung tend to follow the actions of other investors in their investment decisions. It is not surprising that this trend might occur considering the availability of information that spreads so quickly and is considered sufficient as a basis for decision making. In addition, this is also reinforced by novice investors who tend to have less information and knowledge in investing. The better the hearing, the greater the level of an investor's investment decisions. This study is consistent and in accordance with research conducted [21].

## V. CONCLUSION

This study concludes that financial literacy, risk tolerance, and herding have a significant effect on investment decisions for investors in Lampung. The research has implications for behavioral finance theory which explains that the better the level of financial literacy a person has, the better they are at managing personal finances and better understanding of conditions and cognitive errors because someone can make irrational decisions. The higher the level of risk tolerance, the more courageous investors will be in making decisions, even though they still fully follow other investors without conducting technical and fundamental analysis first.

The limitations of this research are the number of respondents is not large enough, so the worry is not representative of the investor population. The research variables used are few and need to be more varied.

Suggestions for this research are: the hope for further research is to increase the number of respondents so that the data is more valid and in addition, with an *r squared* value of 45.1%, further research can add other financial behavior research variables to increase the *r squared* value.

#### REFERENCES

- [1] OJK, "Strategi Nasional Literasi Keuangan Indonesia (SNLKI) 2021 2025," *Ojk.Go.Id*, pp. 1–130, 2021, [Online]. Available: https://www.ojk.go.id/id/berita-dan-kegiatan/publikasi/Pages/Strategi-Nasional-Literasi-Keuangan-Indonesia-2021-2025.aspx.
- [2] M. Haseeb, I. S. Z. Abidin, Q. M. A. Hye, and N. H. Hartani, "The impact of renewable energy on economic well-being of Malaysia: Fresh evidence from auto regressive distributed lag bound testing approach," *Int. J. Energy Econ. Policy*, vol. 9, no. 1, pp. 269–275, 2019, doi: 10.32479/ijeep.7229.
- [3] W. F. M. De Bont and R. Thaler, "Does the Stock Market Overreact?," *J. Finance*, vol. 40, no. 3, pp. 793–805, 1985, doi: 10.1111/j.1540-6261.1985.tb05004.x.
- [4] S. M. Nuryassin and E. Nurhadi, "Pengaruh Literasi Keuangan dan Risk Tolerance Terhadap Keputusan Investasi di Pasar Modal (Studi Pada Investor Saham di Galeri Investasi Universitas Pertamina ...," J. Sociaperti, vol. 1, no. 1, 2021, [Online]. Available: https://library.universitaspertamina.ac.id/xmlui/hand
  - https://library.universitaspertamina.ac.id/xmlui/hand le/123456789/962.
- [5] E. F. Fama, "Session Topic: Stock Market Price Behavior Session Chairman: Burton G. Malkiel Efficient Capital Markets: A Review Of Theory And Empirical Work," *J. Finance*, vol. 25, no. 2, pp. 383–417, 1970.
- [6] Y. C. Setiawan, A. D. R. Atahau, and R. Robiyanto,

- "Cognitive Dissonance Bias, Overconfidence Bias dan Herding Bias dalam Pengambilan Keputusan Investasi Saham," *AFRE (Accounting Financ. Rev.*, vol. 1, no. 1, pp. 17–25, 2018, doi: 10.26905/afr.v1i1.1745.
- [7] F. W. Mutawally and N. A. Haryono, "Pengaruh Financial Literacy, Risk Perception, Behavioral Finance Dan Pengalaman Investasi Terhadap Keputusan Investasi Mahasiswa Surabaya," *J. Ilmu Manaj.*, vol. 7, no. 4, pp. 942–953, 2019.
- [8] Pompian, Behavioral Finance and Wealth Management – How to Build Optimal Portfolios That Account for Investor Biases, vol. 21, no. 4. 2007.
- [9] M. Virigineni and M. Bhaskara Rao, "International Journal of Economics and Financial Issues Contemporary Developments in Behavioral Finance," *Int. J. Econ. Financ. Issues*, vol. 7, no. 1, pp. 448–459, 2017, [Online]. Available: http://www.econjournals.com.
- [10] A. Munawar, S. Suryana, and N. Nugraha, "Pengaruh Literasi Keuangan Dan Faktor Demografi Terhadap Pengambilan Keputusan Berinvestasi," *Akuntabilitas*, vol. 14, no. 2, pp. 253–268, 2020, doi: 10.29259/ja.v14i2.11480.
- [11] A. BUDIARTO, "PENGARUH FINANCIAL LITERACY, OVERCONFIDENCE, REGRET AVERSION BIAS, DANRISK TOLERANCE TERHADAP KEPUTUSAN INVESTASI (Studi pada investor PT. Sucorinvest Central Gani Galeri Investasi BEI Universitas Negeri Surabaya)," *J. Ilmu Manaj.*, vol. 5, no. 2, pp. 1–9, 2017.
- [12] L. A. Mahastanti, "Faktor-Faktor Yang Dipertimbangkan Investor Dalam Melakukan Investasi," *J. Manaj. Teor. dan Ter. J. Theory Appl. Manag.*, vol. 4, no. 3, pp. 37–51, 2011, doi: 10.20473/jmtt.v4i3.2424.
- [13] P. K. Cuong and Z. Jian, "Factors Influencing Individual Investors' Behavior: An Empirical Study of the Vietnamese Stock Market," *Am. J. Bus. Manag.*, vol. 3, no. 2, pp. 77–94, 2014, doi: 10.11634/216796061403527.
- [14] M. Awais, M. Fahad Laber, N. Rasheed, and A. Khursheed, "International Journal of Economics and Financial Issues Impact of Financial Literacy and Investment Experience on Risk Tolerance and Investment Decisions: Empirical Evidence from Pakistan," *Int. J. Econ. Financ. Issues*, vol. 6, no. 1, pp. 73–79, 2016, [Online]. Available: http://www.econjournals.com.
- [15] M. Hamdani, "Analisis Tingkat Literasi Keuangan Dan Pengaruhnya Terhadap Perilaku Keuangan Pada Mahasiswa Prodi Manajemen Universitas Terbuka," *J. Bakti Masy. Indones.*, vol. 1, no. 1, pp.

- 139–145, 2018, [Online]. Available: www.cnnindonesia.com,.
- [16] H. Hikmah, M. Siagian, and P. Siregar, "Analisis Tingkat Literasi Keuangan, Experienced Regret, dan Risk Tolerance pada Keputusan Investasi di Batam," *Jesya (Jurnal Ekon. Ekon. Syariah)*, vol. 3, no. 1, pp. 138–146, 2020, doi: 10.36778/jesya.v3i1.142.
- [17] Y. Yolanda and A. Tasman, "Pengaruh Financial Literacy dan Risk Perception terhadap Keputusan Investasi Generasi Millennial Kota Padang," *J. Ecogen*, vol. 3, no. 1, p. 144, 2020, doi: 10.24036/jmpe.v3i1.8533.
- [18] J. Afriany and A. Hakim, "Pengaruh Terhadap Financial Literacy, Resiko Toleransi, Kemampuan Managemen Resiko Dalam Keputusan Investasi," *Ekon. Keuangan, Investasi dan Syariah*, vol. 2, no. 2, pp. 170–176, 2021, doi: 10.47065/ekuitas.v2i2.660.
- [19] D. Ayu Wulandari and R. Iramani, "Studi Experienced Regret, Risk Overconfidance Dan Risk Perception Pada Pengambilan Keputusan Investasi," J. Bus. Bank., vol. 4, no. 1, 55, 2014, doi: 10.14414/jbb.v4i1.293.
- [20] R. Tri Yusnita, M. Program Doktor Ilmu Manajemen, U. Bandung, D. Fakultas Ekonomi dan Bisnis, and I. ritatri, "Keputusan Investasi Keluarga Ditinjau Dari Perilaku Herding Dan Risk Tolerance Serta Faktor Demografi: Studi Di Kota Tasikmalaya," J. IMAGE /, vol. 10, no. 2, pp. 97– 111, 2021.
- [21] N. A. Rizal and M. K. Damayanti, "Herding Behavior in the Indonesian Islamic Stock Market," *J. Islam. Monet. Econ. Financ.*, vol. 5, no. 3, pp. 673–690, 2019, doi: 10.21098/jimf.v5i3.1079.
- [22] I. O. Fridana and N. Asandimitra, "Analisis Faktor Yang Memengaruhi Keputusan Investasi (Studi Pada Mahasiswi Di Surabaya)," *J. Muara Ilmu Ekon. dan Bisnis*, vol. 4, no. 2, p. 396, 2020, doi: 10.24912/jmieb.v4i2.8729.
- [23] N. A. Addinpujoartanto and S. Darmawan, "Pengaruh Overconfidence, Regret Aversion, Loss Aversion, Dan Herding Bias Terhadap Keputusan Investasi Di Indonesia.," *J. Ris. Ekon. dan Bisnis*, vol. 13, no. 3, p. 175, 2020, doi: 10.26623/jreb.v13i3.2863.
- [24] Ni Putu Priscilia Kartika Dewi and A. Krisnawati, "Pengaruh Financial Literacy, Risk Tolerance Dan Overconfidence Terhadap Pengambilan Keputusan Investasi Pada Usia Produktif Di Kota Bandung," *J. Mitra Manaj.*, vol. 4, no. 2, pp. 236–250, 2020, doi: 10.52160/ejmm.v4i2.344.