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THE INFLUENCE OF FINANCIAL LITERACY, REGRET AVERSION BIAS, AND OVERCONFIDENCE ON INVESTMENT DECISION

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ABSTRACT

Investment decision is a policy taken by investors as an alternative to achieve future profits. By comparing the average salary of formal employees in Jakarta with the cost of living in Jakarta, a question arises about how investors in Jakarta who work as worker make their investment decisions based on their investment capital. The purpose of this study is to examine the effect of Financial Literacy, Regret Aversion Bias, and Overconfidence on Investment Decision among workers in Jakarta. The sample of this study are the workers who work and live in Jakarta that make investment in the capital market. The number of samples in this study was 228 respondents that were obtained by purposive sampling method. This study used Structural Equation Modelling (SEM) for data analysis and using Likert scale as the measurement scale. The result of this study indicated that Financial Literacy, Regret Aversion Bias, and Overconfidence have a positive effect on Investment Decision.

Keyword: *financial literacy; regret aversion bias; overconfidence; investment decision*

1. INTRODUCTION

The capital market has an important role in economic activity and is often used as an indicator of a country's condition. There are many benefits from the presence of the capital market, especially in assisting the development of Indonesia's economy. The capital market has become a media for companies to seek capital and also as a facilitator for people who want to use their funds to invest. In Indonesia, the capital market has experienced very rapid and significant growth. The growth of the capital market can be seen from the increasing number of Single Investor Identification (SID). This is evidenced from Figure 1 which shows the number of SIDs in Indonesia where at the end of 2021, the number of investors in Indonesia was 7,489,337 people. The data was obtained from the Indonesian Central Securities Depository (KSEI) [1].

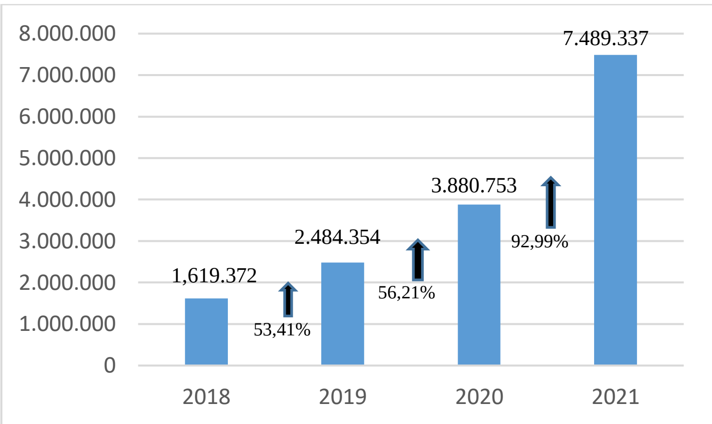

Figure 1. Growth of Indonesia's Single Investor Identification

From Figure 1, it can be seen that investors in Indonesia tend to experience an increase. This increase is very significant, especially in 2021 which increased by 92.99% compared to 2020 and 2019 where the increase was only 56.21% and 53.41%. This is the result of economic improvement due to the Covid-19 pandemic which had slowed down the pace of economic growth. When the Covid-19 pandemic hit, many people experienced economic difficulties. The capital market is no exception, where the prices of stocks and bonds have fallen quite drastically in quite a long time. This decrease in prices resulted in reduced income for investors during the pandemic and many investors also lost money because they made the wrong decision. Therefore, it is very important for investors to wisely make their investment choices. From deciding the instruments and how the buying and selling decisions are chosen. Investment decisions are so important because they can affect the profits obtained by investors and prevent investors from losing.

Investment has become one of the trends in modern society that is carried out by various groups. This is also supported by existing technological advances. Investment activities become easier to do and transactions can be done anytime and anywhere. Investors invest because they have the expectation of a fair return, as well as to achieve profits. The risks for each instrument in the capital market are different. The capital market instruments consist of stocks, mutual funds, bonds, derivative stocks, and Exchange Traded Funds (ETF).

Kompas TV [2] states that the ideal allocation for investing is 20% of salary. Looking at the average salary of formal employees in Jakarta, which is only IDR 4,315,894.00 [3] or can be said to be the highest in Indonesia. This means that employees in DKI Jakarta must set aside at least around IDR 863,179,00. However, this condition becomes difficult because the cost of living in DKI Jakarta is expensive. Based on IDX Channel [4], the cost of living in Jakarta is the most expensive in Indonesia, which is around IDR 3.9 million and above. These statements raise questions about how investors who work as employees in Jakarta determine their investment decisions. Based on the difference between the average salary of formal employees and the cost of living in Jakarta that is not big, investors' capital becomes not that much. This amount of investment capital causes investors not so flexible in making decisions. Meanwhile, investors with more funds are more likely to make several alternative investment choices, such as by diversifying their portfolios. Investors with professions as employees tend to have a low opportunity to invest because of the minimum amount of capital that can be used. This pressure requires investors to make the right decision because an inaccurate investment decision will bring losses to investors.

Investment decision is a policy taken by investors as an alternative to achieve future profits. The investment decision process includes five stages, such as determining investment objectives; determining investment policy; selecting portfolio strategy; asset selection and portfolio making; as well as measuring and evaluating portfolio performance [5]. So, investor should through some careful consideration before making a decision.

Financial literacy is knowledge and skills on personal finance. Financial literacy can encourage one's understanding of financial condition and situation. With good financial literacy, an investor can make wise decisions. The research conducted by [6] shows that there is a positive effect of financial literacy on investment decision. However, in contrast to the results of research conducted by [7] which shows that there is no effect of financial literacy on investment decision.

Pompian [8] divides investor behavior into two categories, namely emotional bias and cognitive bias. Emotional bias, for example, is regret aversion bias, status quo bias, and loss aversion bias. While cognitive bias, for example, is overconfidence, representativeness, and availability bias. Regret aversion bias is a regretful behavior that can arise due to bad experiences with previous investments. So, then investors become more careful in making decisions. The research conducted by [6] shows that there is a positive effect of regret aversion bias on investment decision. Meanwhile, the research conducted by [9] shows that there is no effect of regret aversion bias on investment decision.

Someone's overconfidence or self-confidence can encourage investment decision making because they believe in their own abilities and knowledge. According to [7], the higher the overconfidence an investor will have the courage to make decisions. So conversely, investors with low overconfidence will tend to be afraid in making decisions. In addition, [10] believe that feelings of overconfidence in finances make a person do transactions more often. The research conducted by [9], shows that there is a positive effect of overconfidence on investment decision. In contrast, the research conducted by [11] shows that there is no effect of overconfidence on investment decision.

2. LITERATURE REVIEW

According to [12], "Financial literacy is defined as a knowledge of basic economic and financial concepts, as well as the ability to use that knowledge and skills to manage financial resources effectively for a lifetime of financial well-being." [13] explains that "Financial literacy could be conceptualized as having two dimensions—understanding (private finance knowledge) and use (private finance application)." The research conducted by [14], found that there is a positive effect of financial literacy on investment decisions. Someone with good financial literacy will usually avoid financial problems. Financial literacy has an effect on investment decisions because people with high financial literacy tend to make a person understand more about financial concepts and risks related to investment products, which can then be used in determining investment decisions. This shows that someone that has good financial literacy, will have a better investment decision. Thus, the first hypothesis is developed as follows:
H_1: Financial Literacy has a positive effect on Investment Decision

[7] stated that, "Regret aversion bias is to forestall the pain of regret associated with poor decision making." Regret aversion bias is defined as a decision to act to avoid making the same decision because of the fear of facing the same loss in a person [15]. According to [16], regret aversion bias is the human tendency to feel pressure due to regret after making mistakes. The research conducted by [6], found that there is a positive effect of regret aversion bias on investment decisions. Regret aversion bias can influence an investor's investment decision because when investor make wrong decisions and regret it, they will be fear of facing the same regret. This encourages investors to be more careful in determining their next investment decision, by seeking more information, risks, and current investment trends. So, investors with regret aversion bias tend to be more careful in making investment decisions because they're afraid to face the same regret in the future. Thus, the second hypothesis is developed as follows:
H_2: Regret Aversion Bias has a positive effect on Investment Decision

Overconfidence is the behavior of investors who are optimistic about their knowledge and abilities [17]. [9] stated that "Overconfidence is related to how much prejudice or feelings about how well a person understands their abilities and limits their knowledge." [18] defined

overconfidence as "… an excessive feeling of confidence." The research conducted by [9], found that there is a positive effect of overconfidence on investment decisions. Overconfidence has an effect on investment decisions because high level of overconfidence will encourage bolder decision making caused by a confident and optimistic attitude towards his knowledge of investments and his/her ability to manage investment assets. Overconfidence tends to show an optimistic attitude of investors in making decisions because they judge themselves to have good skills in investment decision making. Thus, the third hypothesis is developed as follows:
H_3: Overconfidence has a positive effect on Investment Decision

[19] stated that, "Investment decision is a strategic decision made to add portfolio and investment opportunities conforming to target allocations." Investment decision is an option chosen to collect additional income obtained from one or more assets with the hope of profitable returns in the future [20].

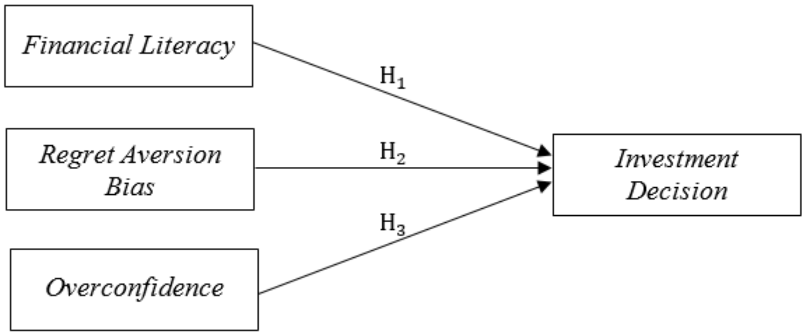

Figure 2. The Research Model

3. RESEARCH METHODOLOGY

This research used descriptive research design and quantitative approach. The population of this study are all the workers who work and live in Jakarta that are investing in capital market. The sampling technique used in this study was purposive sampling. The purposive sampling technique was chosen in order to directly reach individuals with the targeted criteria. The number of samples of this study was 228 respondents. The type of data used in this study was primary data distributing online questionnaires using Google Forms. Filling out the questionnaire was carried out by the respondents by choosing statements. The data collected was using a Likert scale with score ranging from 1 to 5 (Score 1: strongly disagree, 2: disagree, 3: neutral, 4: agree, and 5: strongly agree). This study used Structural Equation Modelling (SEM) for data analysis technique, by using SmartPLS software. Data analysis was carried out by doing outer model analysis and inner model analysis.

Financial Literacy variable was measured by 6 items that are adapted from [12] and [21]: (1) "I set my money aside for emergency fund", (2) "I set my own financial budget", (3) "I spend money based on the budget I made", (4) "I am able to calculate the advantages and disadvantages of financial transactions", (5) "I am interested in financial news", and (6) "My knowledge of finance helps me avoid financial problems".

Regret Aversion Bias variable was measured by 5 items that are adapted from [9] and [22]: (1) "I choose to keep my investment over other investments that have a high rate of return but with great risk", (2) "When I experience a loss, I tend to avoid making the same investment", (3) "I became afraid and unsure of investments that have made me lose", (4) "Regret after making the wrong decision makes me afraid to invest again", and (5) "The experience of regret has made me more careful in making investments".

Overconfidence variable was measured by 5 items that are adapted from [8], [23], and [9]: (1) "I am very confident with the investment choices that I make", (2) "I trust my own opinion more than friends or colleagues in investing", (3) "I believe in my investment choices, even without supporting information", (4) "In making investment decisions, I tend to follow the information I get myself", and (5) "I believe that the profit I get is based on my own ability".

Investment Decision variable was measured by 6 items, that are adapted from [24], [25], and [14]: (1) "Experience is the basis for me before making future investment decisions", (2) "I choose investments based on information that I can easily get", (3) "I will invest in instruments that have good performance.", (4) "Before investing, I will find out the risks that will be faced", (5) "I invest to meet my future needs", and (6) "I invest for sustainable profit".

4. RESULTS AND DISCUSSIONS

Table 1. Validity and Reliability Test Results

Variable	AVE	Cronbach's Alpha	Composite Reliability
Financial Literacy	0.666	0.899	0.923
Investment Decision	0.608	0.870	0.903
Overconfidence	0.688	0.885	0.917
Regret Aversion Bias	0.729	0.907	0.931

Table 1 shows that all variables in this study have Average Variable Extracted (AVE) values that are larger than 0.5 and all variables have Cronbach's Alpha and Composite Reliability values that are larger than 0.6 and 0.7. So, the numbers show that all of the variables in this study have met the requirements to be stated as valid and reliable. The coefficient of determination (R^2) of Investment Decision variable is 0.699 or 69.9%. This means that 69.9% of the variation in the investment decision variable can be explained by the independent variables, such as financial literacy, regret aversion bias, and overconfidence. Meanwhile, the goodness-of-fit result in this study is 0,6857. So, can be concluded that the suitability of the model in this study is large.

Table 2. The Results of Bootstrapping Test

Variable	Path Coefficient	t-Statistics	p-Value
Financial Literacy > Investment Decision	0.278	4.469	0.000
Overconfidence > Investment Decision	0.368	5.430	0.000
Regret Aversion Bias > Investment Decision	0.280	3.546	0.000

Table 2 shows the result of the hypothesis test of this study. The test of hypothesis 1 (H_1) shows that financial literacy has a positive effect on investment decision of workers in Jakarta with path coefficient = 0.278, t-statistics = 4.469 (greater than 1.96), and p-values = 0.000 (less than 0.05). Investors with good financial knowledge and skills will be able to manage and allocate

their money in the right investment instruments because financial literacy encourages investors to understand the level of risk and financial in investments. So based on the test of H_1, it can be stated that financial literacy has a positive effect on investment decision. The result of this study is in accordance with the result of previous studies conducted by [20], [6], and [14].
The test of hypothesis 2 (H_2) shows that there is a positive effect regret aversion bias on investment decision of workers in Jakarta with path coefficient = 0.280, t-statistics = 3.546 (greater than 1.96), and p-values = 0.000 (less than 0.05). Regret in making decisions in the past will make investors become more careful because they are reluctant to feel the same regrets. Thus, investors tend to find more information for their next decision. So based on the test of H_2, it can be stated that regret aversion bias has a positive effect on investment decision. The result of this study is in accordance with that of previous study conducted by [7], [9], and [6].

The test of hypothesis 3 (H_3) shows that there is a positive effect overconfidence on investment decision of workers in Jakarta with path coefficient = 0.368, t-statistics = 5.430 (greater than 1.96), and p-values = 0.000 (less than 0.05). Investors' overconfidence indicates an optimistic attitude in making decisions. Investors become more courageous in making decisions because investors believe that they have a good ability to make their investment decisions. So, based on the test of H_3, it can be stated that overconfidence has a positive effect on investment decision. The result of this study is in line with previous study conducted by [9].

5. CONCLUSIONS, LIMITATION, AND SUGGESTIONS

The results of this study show that (1) financial literacy has a positive effect on investment decision, investors with high level of financial literacy will be able to manage and allocate their money in the right instruments because financial literacy encourages the understanding of risks and financial concepts of investment; (2) regret aversion bias has a positive effect on investment decision, when investors make mistakes and regret it, investors will try to avoid the same mistake by being more careful in making next decisions; and (3) overconfidence has a positive effect on investment decision, as overconfidence shows an optimistic attitude from investors so investors become bolder in making investment decisions because they believe that they have good sources of information, knowledge, and ability to make decisions. The theoretical implication of this study is the discovery of positive effects of financial literacy, regret aversion bias, and overconfidence on investment decisions. Thus, it is hoped that investors can increase their financial literacy, regret aversion bias, and overconfidence. The practical implication of this research is that the results of this research are expected to be used as material for consideration for investors in making decisions. Investors can understand more about investment behavior that can influence investment decisions and be able to respond it properly. This study has a limitation, which is only using workers in Jakarta as the respondents. So, this study only can be used to explain investment decisions of workers in Jakarta. Future researchers are advised to increase the number of samples used in the study. Thus, the sample can be more precise in representing the population. Future researchers are also advised to add more variables in explaining Investment Decision variable. Employees in DKI Jakarta who are investing, are advised to increase their financial literacy by attending seminars and training, reading books and articles related to finance, and increasing discussions and exchanging ideas with other investors. Good financial understanding will help investors avoid financial problems and can help make good investment decisions. Employees in DKI Jakarta who make investments, are advised to have a positive mind after losses in investing, by being more careful in making investment decisions. Employees in DKI Jakarta who make investments, are advised to increase their knowledge about investment and the capital market from various books and articles about investment and use valid and reliable sources of information so that investors can develop a sense of confidence and optimism. So, investors can make good investment decisions. Government of Jakarta are advised to collaborate with universities, securities companies, or institutions in the capital market in order to raise the level of knowledge and understanding of finance and investment in the community, especially investors, through seminars, education, and financial training so that decision making becomes better.

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