The Role of Financial Behavior in Improving Investment Decision: Empirical Evidence of The Students of Economics and Business Faculty UPN “Veteran” Jawa Timur

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ARTICLE INFORMATION
ABSTRACT

Financial behavior can understand the behavior of investors in making investment decisions. Investment decision making is a process of selecting the best alternative from a number of alternatives that are available under the influence of complex situations. Investment decision making is influenced by several factors, namely Anchoring Bias, Loss Aversion, and Overconfidence. The purpose of this research is to examine the contribution of Anchoring Bias, Loss Aversion, and Overconfidence of Active Students in the Faculty of Economics and Business UPN “Veteran” East Java as investors in improving investment decision making. The sampling technique used was purposive sampling with the sample determination technique using the Slovin formula. This study used 99 investor respondents who had invested more than three months and were active students of the Faculty of Economics and Business, UPN “Veteran” East Java. The data collection technique used a questionnaire which was then analyzed using a quantitative descriptive method with the Partial Least Square (PLS) model. The results of this study indicate that Anchoring Bias can contribute to improving investment decision making, Loss Aversion can contribute to improving investment decision making, and Overconfidence can contribute to improving investment decision making.
INTRODUCTION

In the era of globalization, the capital market has become an important component in today's economy. The capital market is an activity that is concerned with public offerings and securities trading, public companies related to securities issued, and institutions and professions related to securities. Securities are securities in the form of debt instruments, commercial securities, shares, bonds, evidence of debt, collective investment units, futures contracts for securities, and any derivative of securities. The general picture on the Indonesia Stock Exchange shows that the investment performance of various types of investment in a period of five years nationally has fluctuated due to factors that affect, namely Anchoring Bias, Loss Aversion, and Overconfidence. Investment performance is useful for investors because investors always expect high returns or returns, so it is very important for investors to know investment performance. Investors must know and control the biased behavior that will occur because it will have an impact on investment decision making, if investors cannot control financial bias behavior, there will be a problem in making investment decisions which will have an impact on the returns obtained by investors not as expected.

In investing, investors are faced with making investment decisions, an investment decision is a decision to allocate funds or assets both from inside and outside the company into a form of investment with the aim of obtaining future profits. In this study, the measures of investment decision making are Anchoring Bias, Loss Aversion, and Overconfidence. In this increasingly modern era, there are a lot of investments made by students so that young investors are growing, which has an impact on the spread of young investors. The side effect of the spread of investors who are considered beginners in the investment sector, does not rule out the possibility that student investment behavior will lead to behavioral biases.

These behavioral deviations or biases are more prevalent among younger investors and they tend to set a standard figure for an investment based on the initial purchase price of the investment. So that if the value of their investment starts to fall, they still believe that the investment value will go up again and are not willing to sell it. Anchoring bias is a phenomenon that is used in situations when someone uses an initial assessment of the purchase price of an investment to make an estimate for investing afterward, but in fact this will often give different results from what was estimated (Le Luong & Thi Thu Ha, 2011).

The bias of investor behavior which is based on emotion can lead to a tendency for loss aversion. Rapid decision making in conditions of risk and uncertainty makes the behavior of many day trader investors influenced by cognitive biases, and psychological biases, coupled with emotions induced by the external environment causing Loss Aversion behavior (Ady, 2015). Fast decision-making in conditions of risk and uncertainty makes investor behavior influenced by cognitive bias and psychological bias, coupled with emotions induced by the external environment, causing overconfidence, namely feelings of overconfidence. Overconfidence will make investors overstimulated to the knowledge owned by the investors themselves, and underestimate the predictions made because investors exaggerate their abilities (Nofsinger, 2005).

Anchoring Bias, Loss Aversion and Overconfidence are things that need to be considered in investing because if left unchecked it will be detrimental to the investors themselves. With the existence of investor problems in making these decisions, researchers are interested in conducting further research whether the Anchoring Bias, Loss Aversion and Overconfidence have an influence on investors when making investment decisions. This study took the research object of the active student of Economics and Business Faculty, UPN "Veteran" East Java who had invested for three months.

LITERATURE REVIEW

According to Tandelilin (2001), investment is a commitment to a number of funds or other resources that are carried out at this time with the aim of obtaining future profits. According to Subash (2012), investment decisions are a process of choosing alternatives from various alternatives to choose investments that can provide returns or rates of return in accordance with investor expectations.

According to Waweru et al., (2008: 27) in Lubis et al., (2013) and Charissa (2018), Anchoring can have a close relationship with representativeness because anchoring bias is a reflection of a condition in which investors
generally focus on current events this and too optimistic when there is a market increase, and too pessimistic when there is a market decline.

Tilson (2005: 8) in Lubis et al. (2013) states that investors will feel more hurt when experiencing loss aversion than experiencing gains even though in the same amount. Feelings of disappointment experienced by investors who experience loss aversion can be two times deeper than experiencing a gain even though in the same amount.

According to Supramono and Theresia, (2018: 83) that anchoring and adjustment is the tendency to initiate a certain value to be able to make an assessment. In psychological terms, anchoring and adjustment, known as focalism, refers to the human tendency to accept and rely on the first piece of information received before making a decision.

According to research by Le Luong & Thi Thu Ha (2011), anchoring bias has a positive effect on investment decisions which results in investors making investment decisions which results in investors making decisions quickly to set targets or price standards first before buying or selling investments. Based on this theory and research, anchoring bias contributes to improving investment decision making.

According to Lubis et al., (2013: 20), investors will feel more hurt when experiencing loss aversion than experiencing gains even in the same amount. Feelings of disappointment experienced by investors who experience loss aversion can be two times deeper than experiencing a gain even though in the same amount.

According to research by Alquraan et al., (2016) and Nofsinger (2005: 10) the results show that financial behavior factors such as loss aversion, overconfidence, and risk perception have a significant effect on individual investors' stock decisions on SSM, while herd has a significant effect, not significant. Based on the theory and research shows that loss aversion contributes to improving investment decision making.

According to Supramono and Theresia, (2018: 96), overconfidence behavior is the tendency for a person to feel that he has an ability above average, often known as the better than effect. This tendency will cause a person to feel smarter, ignore possible bad risks, and feel in control of the outcome of an event.

According to Jannah and Ady (2017) research, it aims to determine the effect of fundamental analysis, interest rates, and overconfidence on investment decisions in investors in Surabaya. The results showed that fundamental analysis and overconfidence affect investment decisions while interest rates do not, but simultaneously fundamental analysis, overconfidence and interest rates affect investment decisions. Based on this theory and research, overconfidence contributes to increasing investment decision making.

METHOD

Operational Definition

Anchoring Bias.

According to Vijaya (2014), anchoring bias supports investors in determining the size of the value of an investment based on the latest observations made regarding the purchase price. Anchoring bias can be measured through three indicators, namely:

a. Strongly influenced by past investment performance when choosing the type of investment to invest.

b. Set a target or price standard first before buying or selling an investment.

c. You will still maintain your investment if you feel you will lose money if you sell it.

Loss Aversion.

According to Vijaya (2014), loss aversion refers to differences in the mental level of a person due to loss or gain of the same size. Loss aversion can be measured through three indicators, namely:

a. Expect your investment to show a definite return.

b. Always be careful of any sudden changes that will cause harm.

c. Knowing with certainty the performance of the form of investment to be invested.

Overconfidence.

According to Shefrin (2007), Overconfidence describes the attitude of being overconfident related to how much prejudice or feelings about how well a person understands one's abilities. Overconfidence can be measured through three indicators, namely:

a. Trust in the capabilities and knowledge possessed compared to other investors.

b. Very sure to get a big profit.
c. Very confident in the investment choices made.

Investment Decision.

According to Vijaya (2014), investment decisions are an alternative in deciding the amount of capital to invest in order to get the expected return. Investment decisions can be measured through three indicators, namely:

a. Information search
b. Evaluation
c. Re-investment

Population and Sample

The population in this study was UPN "Veteran" Active Students in East Java who made investment decision making totaling 150 respondents. The sampling technique used purposive sampling, while the sample criteria in this study were respondents who were active students of UPN "Veteran" East Java who had invested more than three months. The formula for determining the sample using the Slovin formula is as follows:

\[ n = \frac{N}{1 + N(e)^2} \]

\[ n = \frac{150}{1 + 150(0.1)^2} = 99.33 \]

Adjusted by researchers to 99 respondents.

Data Analysis Technique

The analysis technique in this study uses Partial Least Square (PLS) which is a research method for constructing models that can be analyzed when too many factors in a study (Wold, 1982).

RESULT AND DISCUSSION

Result

Measurement Model and Indicator Validity.

The model of the relationship between variables and indicators in the measurement model for exogenous variables with reflective indicators, namely variables Anchoring Bias, Loss Aversion, and overconfidence, and endogenous variables, namely investment decisions based on the outer loading table.

| Table 1. Outer Loadings |
|-------------------------|
| Factor Loading | Sample Mean | Standard Deviation | Standard Error | T Statistics |
| X1.1 | 0.719 | 0.696 | 0.083 | 0.083 | 8.614 |
| X1.2 | 0.898 | 0.904 | 0.031 | 0.031 | 28.174 |
| X1.3 | 0.544 | 0.520 | 0.140 | 0.140 | 3.883 |
| X2.1 | 0.798 | 0.795 | 0.042 | 0.042 | 18.887 |
| X2.2 | 0.826 | 0.825 | 0.030 | 0.030 | 27.022 |
| X2.3 | 0.778 | 0.784 | 0.041 | 0.041 | 18.743 |
| X3.1 | 0.767 | 0.765 | 0.041 | 0.041 | 18.367 |
| X3.2 | 0.812 | 0.807 | 0.043 | 0.043 | 18.563 |
| X3.3 | 0.809 | 0.811 | 0.032 | 0.032 | 24.675 |
| Y1.1 | 0.871 | 0.866 | 0.030 | 0.030 | 28.866 |
| Y1.2 | 0.853 | 0.857 | 0.018 | 0.018 | 46.032 |
| Y1.3 | 0.789 | 0.792 | 0.041 | 0.041 | 18.940 |

Based on the outer loading table above, validity is measured by looking at the factor loading value from the variable to the indicator, it is said that the validity is sufficient if it is greater than 0.5 and / or the T-Statistics value is greater than 1.96 (Z value at \( \alpha = 0.5 \)). Factor loading is a correlation between indicators and variables, if greater than 0.5 is considered validity is fulfilled as well as the T-Statistics value is greater than 1.96 then the significance is fulfilled.

Based on the outer loading table above, the Bias Anchoring, Loss Analysis, and Overconfidence variables all show the indicator has a factor loading greater than 0.5 and the T-Statistics value is greater than 1.96, so all of the indicators are valid and measure the Anchoring variable indicators Bias, becomes a measure or indicator of the Loss Aversion variable, becomes a measure or indicator of the Overconfidence variable.

Variable Validity (Construct).

Testing the next measurement model is to look at the value of AVE (Average Variance Extracted), which is a value that indicates the magnitude of the variant indicators that can be applied by the latent variable. AVE values greater than 0.5 also indicate the adequacy of good convergent validity for latent variables. AVE values can be seen in the table below.

| Table 2. Average Variance Extracted |
|-------------------------------------|
| AVE |
| Anchoring Bias (X1) | 0.540 |
| Loss Aversion (X2) | 0.642 |
| Overconfidence (X3) | 0.634 |
| Keputusan Investasi (Y) | 0.703 |
The test results show that the AVE value for the construct (variable), Anchoring Bias, Loss Aversion, Overconfidence, and Investment Decision has a value greater than 0.5 so that the overall variables in this study have good validity.

**Reliability.**

The reliability of the construct is measured by the value of composite reliability, if the construct is reliable, if the value of the composite reliability is above 0.70, the indicator is said to be consistent in measuring its latent variables.

| Table 3. Composite Reliability                  | Composite Reliability |
|------------------------------------------------|-----------------------|
| Anchoring Bias (X1)                            | 0.772                 |
| Loss Aversion (X2)                              | 0.843                 |
| Overconfidence (X3)                             | 0.839                 |
| Keputusan Investasi (Y)                         | 0.876                 |

The test results show that all constructs or variables including Anchoring Bias, Loss Aversion, Overconfidence, and Investment Decisions have composite reliability values above 0.70 so that it can be said that all variables in this study are reliable.

**Structural Model.**

In assessing the R-Square, it is obtained in testing the structural model which is a goodness-fit test of the model in the equation between latent variables. The value of R2 explains how much exogenous variables (independent or free) in the model are able to explain endogenous variables (dependent or bound).

| Table 4. R-Square                              | R-Square |
|------------------------------------------------|----------|
| Anchoring Bias (X1)                            |          |
| Loss Aversion (X2)                              |          |
| Overconfidence (X3)                             |          |
| Keputusan Investasi (Y)                         | 0.465     |

R2 value = 0.465. This can be interpreted that the model is able to explain the phenomenon of Investment Decisions that are influenced by independent variables such as the Bias Anchoring, Loss Aversion, and Overconfidence.

**Causality Test.**

In the Partial Least Square (PLS) the path parameter coefficients are obtained using the inner model weights by first looking for the T-Statistics value through the standard error bootstrap procedure, with the calculation results of the PLS smart software as follows.

![Figure 1. Structural Model Results](image)

Furthermore, the results of testing the inner model hypothesis described in table 7 can be seen from the path coefficient in the following.

| Table 7. Path Coefficients                     | Path Coefficients | Standard Error | T Statistics |
|------------------------------------------------|-------------------|----------------|-------------|
| Anchoring Bias - Keputusan Investasi           | 0.187             | 0.080          | 2.328       |
| Loss Aversion - Keputusan Investasi            | 0.404             | 0.089          | 4.552       |
| Overconfidence - Keputusan Investasi           | 0.221             | 0.065          | 3.389       |

Based on the data in the table above, it can be seen that the relationship between variables is as follows:

1. Anchoring Bias is able to contribute to improving investment decision making, meaning that it has a positive and significant effect, with path coefficients of 0.187 and a T-Statistics value of 2.328 greater than $Z \alpha = 1.96$.

2. Loss Aversion is able to contribute in increasing investment decision making, meaning that it has a positive and significant
effect, with path coefficients of 0.408 and a T-Statistics value of 4.552 greater than Z $\alpha = 1.96$.

3. Overconfidence is able to contribute in increasing investment decision making, meaning that it has a positive and significant effect, with path coefficients of 0.221 and a T-Statistics value of 3.389, greater than Z $\alpha = 1.96$.

Discussion

Contribution of Anchoring Bias to Investment Decision Making.

Based on the results of the research that has been done, it is found that anchoring bias has a positive effect on investment decision making, it is acceptable. The results of this study indicate that the hypothesis proposed is that the anchoring bias factor has a positive and significant effect on investment decision making. From the results of respondents' answers indicate that the most expected indicator is to set a target or price standard before buying or selling an investment, because in general investors aim to get high returns supported by the highest mean value to see the current state and supported by the highest factor loading value, to see the hope to come. The same results are also in the results of Cross Loading, the most influential indicator is to set a target or price standard before buying or selling an investment, because in general investors invest with the aim of getting a return in making investment decisions. This means that the respondent experiences an anchoring bias in making investment decisions. These results support and are also in accordance with research conducted by Charissa (2018) which states that there is a positive and significant effect of anchoring bias on investment decision making.

Contribution of Loss Aversion to Investment Decision Making.

Based on the results of research that has been done, it is found that loss aversion has a positive effect on investment decision making, which is acceptable. The results of this study indicate that the hypothesis proposed is that it is assumed that the loss aversion factor has a positive and significant effect on investment decision making. From the results of the respondents' answers, it shows that the most expected indicator is that they hope that investment shows a definite profit and always be careful of any sudden changes that will cause losses so that investors experience loss aversion which means experiencing doubts when investing will get a high risk rather than getting a return. in investment decision making supported by the highest mean value and supported by the highest loading factor value, which is always careful of any sudden changes that will cause losses. The result of Cross Loading, the most influential indicator, is to always be careful of any sudden changes that cause losses, because in general investors are afraid and feel more hurt when getting a risk than getting a return. These results support and are also in accordance with research conducted by Alquraan, et al., (2016) which states that there is a positive and significant effect of loss aversion on investment decision making.

Contribution of Overconfidence on Investment Decision Making.

Based on the results of research that has been done, it is found that overconfidence has a positive effect on investment decision making, which is acceptable. The results of this study indicate that the hypothesis proposed is that the overconfidence factor has a positive and significant effect on investment decision making. From the results of the respondents' answers, it shows that the most expected indicator is that they are sure that they will get a large investment return and are very confident about the investment choices made, because with a feeling of being very confident about their chosen investment, they will experience overconfidence when making investment decisions supported by the mean value. the highest and supported by the highest factor loading value, which is sure to get investment returns. The result of Cross Loading, the most influential indicator is that investors are always confident in making investment decisions so that investors are sure that their investment will get a high return. These results support and are also in accordance with research conducted by Jannah and Ady (2017) which states that there is a positive and significant effect of overconfidence on investment decision making.
CONCLUSION

Based on the results of testing using PLS analysis, to test the influence of several variables on investment decision making, the following conclusions will be drawn:

1. Anchoring bias can contribute to improving investment decision making. This means that the higher the level of anchoring bias owned by investors, the higher the investment decision making.

2. Loss Aversion can contribute to improving investment decision making. This means that the higher the level of Loss Aversion owned by investors, the higher the investment decision making.

3. Overconfidence can contribute to improving investment decision making. This means that the higher the level of Overconfidence owned by investors, the higher the investment decision making.

Behavioral Finance or Financial Behavior is further developed by increasing financial behavior education so that investors can develop their knowledge regarding better investment decision making, if each investor can manage good financial behavior or financial behavior can be formed then investment decision making can be managed by both so that the level of significance remains good and financial behavior must be maintained so that it remains real or can contribute to improving investment decision making.

Suggestions for further researchers are to add other variables in improving investment decision making, because there are several other variables that influence investment decision making such as: representativeness, availability bias, gambler's fallacy, regret aversion, mental accounting, herding, and market factors. With the higher the level of variables that affect investment decision making, the higher the return or rate of return received by investors. So, the more you add other variables that influence investment decision making, the more it contributes to improving investment decision making.

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