



## Original Article

### Investor Behavior In Investment Decisions

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#### Abstract:

Quantitative approach as a type of research with questionnaires as a data collection tool. The population in the study were class A students of the management study program, class of 2021, Balikpapan University with a sample of 94 people. The data analysis method used multiple linear regression analysis for hypothesis testing, and the coefficient of determination. The results of the study showed that partially, the variables *overconfidence*, and investment knowledge had a positive and significant effect on Investment Decisions, while the variables investment motivation and risk tolerance had no effect.

**Keywords:** *Overconfidence*, investment knowledge, investment motivation, risk tolerance, investment decisions

#### Introduction

Nowadays, along with the rise of consumer culture among the people which is not accompanied by knowledge about financial management and existing financial products, it will cause waste of income and economic difficulties. It is not uncommon for people with a frugal, careful and modest lifestyle to experience economic difficulties due to choosing the wrong investment product. By expecting a large return from the investment made, but if it is not accompanied by adequate financial literacy knowledge, the financial risks that may arise will be greater than the initial prediction. The increasingly advanced economic development makes people want to earn income outside of their jobs. One way is to invest and carry out good financial management.

In investing to start it requires the right decision in choosing which product is right for us to invest in. The decision to invest is a final process after going through various phases or thought processes and considerations from a person. Because the decision taken will determine the good and bad results obtained in the future. Likewise with the investment decision owned by a student where with the provision of knowledge and science that is still inadequate will certainly have an impact on his thinking about investment. Moreover, now there are so many fake investment platforms wrapped in



<https://jurnal.usk.ac.id/riwayat>

trading.

Investment decisions as actions taken by investors to invest money or a number of assets in the capital market with the aim of gaining profits in the future. ([Geriadi, 2023](#)). Making investment decisions is one of the important decisions for individuals or groups. This is because investment decisions have the potential to provide high profits, but also have high risks ([E. P. Ningrum et al., 2023](#)). Based on previous research, several financial behavioral factors will influence, such as *overconfidence*, investment knowledge, investment motivation, and risk tolerance.

Investors who have a high level of *overconfidence* will potentially trade more often" [Pradikasari \(2018\)](#) in ([Salwah, 2022](#)). Research that ([Budiman et al., 2021](#)) found the results of *overconfidence* has a positive effect on investment decisions. Research ([P. A. P. Ningrum et al., 2023](#)) says *overconfidence* has a negative and significant effect on investment decisions. Findings ([Pradipta & Yuniningsih, 2023](#)) Investment motivation has a positive influence on investment decisions, but does not support it. ([Fitriasuri & Simanjuntak, 2022](#)) that investment motivation has no effect. Based on the findings ([P. A. P. Ningrum et al., 2023](#)), risk tolerance has a significant positive effect on investment decisions, but this is not in line with the ([Listiani & Soleha, 2023](#)) fact that risk tolerance has no effect.

## Methods

This type of research uses a descriptive verification research type through quantitative research. This method is chosen to see the influence between two or more variables. Quantitative research methods are research that uses tools to process data using statistics, therefore the data obtained and the results obtained are in the form of numbers ([Sahir, 2021, p.9](#)). To determine the relationship between two or more dependent variables (X) and independent variables (Y), multiple linear analysis is used which is presented in the form of a regression equation. The primary data collection method is a survey, by distributing questionnaires (google form). Several tests conducted include validity tests, reliability tests and classical assumption tests as prerequisites that must be met in hypothesis testing with SPSS.

## Validity Test

The measuring tool for conducting validity tests is SPSS by comparing the calculated r value in the total score column with the r table (eg r table = 0.361 at the  $\alpha$  level = 0.05 and N = respondents). The calculation results show that the calculated r value > r table, then all instrument items are declared valid. ([Widodo et al., 2023, p.60](#)).

## Reliability Test

The measuring tool for conducting reliability tests is SPSS with the *Cronbach Alpha formula*. From the output results, it is known that if the *Cronbach alpha value* is compared with the r table value, the reliability of the instrument will be known. R table is sought at a significance value of 0.05 with a 2-sided test by looking at n data (number of data). If the r value (*Cronbach alpha*) > r table, then it can be concluded that the items are reliable ([Widodo et al., 2023, p.66](#)).

## Multicollinearity Test

The multicollinearity test aims to see whether or not there is a high relationship between independent variables in a multiple linear regression model. If there is a

high correlation between the independent variables, then the relationship between the independent variables and the dependent variables is disrupted. The measuring tool for conducting the reliability test is SPSS, then the tolerance value will be above 0.10 and the VIF value will be below 10 so that it can be concluded that there is no multicollinearity problem in the regression model.

### Heteroscedasticity Test

Glesjer test suggests to regress the absolute value of the residual against the independent variable. A good regression model is homoscedasticity or no heteroscedasticity. If the independent variable is statistically significant then it affects the dependent variable. The basis for drawing conclusions in this study is if the significance is  $> 0.05$  then it can be concluded that there is no heteroscedasticity problem. After the classical assumption test is fulfilled, further research testing is carried out with several types, including:

### Multiple Linear Regression Analysis

Multiple Regression can be defined as the influence between more than two variables, consisting of two or more independent variables and one dependent variable), and is used to build equations and use these equations to make estimates (assumptions) ([Ahmaddien & Syarkani, 2019, p.64](#)).

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + e$$

### Hypothesis Test (t-Test)

The T-test aims to test the regression coefficient partially. This test is carried out to determine the significance of the partial role (relationship) between the independent variable and the dependent variable by assuming that the other independent variables are considered constant ([Ahmaddien & Syarkani, 2019, pp.65-66](#)).

## Results

### Validity Test

Table 1  
Validity Test Results

| Variables                        | Item  | <i>Person Correlations</i> | r-table<br>n=30 | Information |
|----------------------------------|-------|----------------------------|-----------------|-------------|
| Investment Decision (Y)          | KI1.1 | 0.702                      | 0.361           | Valid       |
|                                  | KI1.2 | 0.680                      | 0.361           | Valid       |
|                                  | KI1.3 | 0.716                      | 0.361           | Valid       |
|                                  | KI2.1 | 0.798                      | 0.361           | Valid       |
|                                  | KI2.2 | 0.715                      | 0.361           | Valid       |
|                                  | KI2.3 | 0.307                      | 0.361           | Invalid     |
|                                  | KI2.4 | 0.348                      | 0.361           | Invalid     |
| Overconfidence (X <sub>1</sub> ) | OV1.1 | 0, 323                     | 0.361           | Invalid     |
|                                  | OV1.2 | 0.784                      | 0.361           | Valid       |
|                                  | OV2.1 | 0.824                      | 0.361           | Valid       |
|                                  | OV3.1 | 0.635                      | 0.361           | Valid       |
|                                  | OV3.2 | 0.602                      | 0.361           | Valid       |
|                                  | OV4.1 | 0.733                      | 0.361           | Valid       |
| Investment                       | PI1.1 | 0.764                      | 0.361           | Valid       |

|                                         |       |       |       |         |
|-----------------------------------------|-------|-------|-------|---------|
| Knowledge (X <sub>2</sub> )             | PI1.2 | 0.854 | 0.361 | Valid   |
|                                         | PI2.1 | 0.631 | 0.361 | Valid   |
|                                         | PI2.2 | 0.713 | 0.361 | Valid   |
|                                         | PI3.1 | 0.732 | 0.361 | Valid   |
| Investment Motivation (X <sub>3</sub> ) | MI1.1 | 0.251 | 0.361 | Invalid |
|                                         | MI1.2 | 0.777 | 0.361 | Valid   |
|                                         | MI2.1 | 0.671 | 0.361 | Valid   |
|                                         | MI2.2 | 0.686 | 0.361 | Valid   |
|                                         | MI2.3 | 0.736 | 0.361 | Valid   |
|                                         | MI2.4 | 0.765 | 0.361 | Valid   |
| Risk Tolerance (X <sub>4</sub> )        | TR1.1 | 0.222 | 0.361 | Invalid |
|                                         | TR1.2 | 0.754 | 0.361 | Valid   |
|                                         | TR2.1 | 0.748 | 0.361 | Valid   |
|                                         | TR2.2 | 0.749 | 0.361 | Valid   |
|                                         | TR3.1 | 0.748 | 0.361 | Valid   |
|                                         | TR3.2 | 0.823 | 0.361 | Valid   |
|                                         | TR3.3 | 0.292 | 0.361 | Invalid |

Source: SPSS Output

The correlation coefficient (*Pearson Correlations*) of each statement for each variable is greater than the r-table, which is 0.361. Except for the statements; Investment Decisions (KI2.3 and KI2.4), *Overconfidence* (OV1.1), Investment Motivation (MI1.1), and Risk Tolerance (TR1.1 and TR 3.3) are declared invalid. Statements that are not considered invalid and are not included in the research questionnaire.

### Reliability Test

Table 2  
Reliability Test Results

| Variables                               | <i>Cronbach's Alpha</i> Value | Critical Value | Information |
|-----------------------------------------|-------------------------------|----------------|-------------|
| Investment Decision (Y)                 | 0.713                         | 0.70           | Reliable    |
| Overconfidence (X <sub>1</sub> )        | 0.757                         | 0.70           | Reliable    |
| Investment Knowledge (X <sub>2</sub> )  | 0.780                         | 0.70           | Reliable    |
| Investment Motivation (X <sub>3</sub> ) | 0.754                         | 0.70           | Reliable    |
| Risk Tolerance (X <sub>4</sub> )        | 0.720                         | 0.70           | Reliable    |

Source: SPSS Output

It can be seen that the variables Investment Decision (Y), *Overconfidence* (X<sub>1</sub>), Investment Knowledge (X<sub>2</sub>), Investment Motivation (X<sub>3</sub>), and Risk Tolerance (X<sub>4</sub>) have a *Cronbach's Alpha* greater than 0.70 so that it can be said that all the variable measurement concepts used in this study are reliable and can be relied on.

### Multicollinearity Test

The results of the multicollinearity test can be seen as follows:

Table 3  
Multicollinearity Test Results

| Variables                        | <i>Collinearity Statistics</i> |       | <i>Tolerance</i> Standard | VIF Standard | Information     |
|----------------------------------|--------------------------------|-------|---------------------------|--------------|-----------------|
|                                  | <i>Tolerance</i>               | VIF   |                           |              |                 |
| Overconfidence (X <sub>1</sub> ) | 0.584                          | 1,711 | >0.1                      | <10          | No Multicolline |
| Investment                       | 0.726                          | 1,377 | >0.1                      | <10          |                 |

|                                         |       |       |      |     |              |
|-----------------------------------------|-------|-------|------|-----|--------------|
| Knowledge (X <sub>2</sub> )             |       |       |      |     | arity Occurs |
| Investment Motivation (X <sub>3</sub> ) | 0.469 | 2,131 | >0.1 | <10 |              |
| Risk Tolerance (X <sub>4</sub> )        | 0.737 | 1,359 | >0.1 | <10 |              |

Source: SPSS Output

Multicollinearity test, shows the *Tolerance value* > 0.1 and VIF of each variable is < 10. *Overconfidence variable* (X<sub>1</sub>) with a *Tolerance value* of 0.584 and VIF of 1.711, Investment Knowledge variable (X<sub>2</sub>) with a *Tolerance value* of 0.726 and VIF of 1.377, Investment Motivation (X<sub>3</sub>) with a *Tolerance value* of 0.469 and VIF of 2.131, and Risk Tolerance (X<sub>4</sub>) with a *Tolerance value* of 0.737 and VIF of 1.359. Overall there is no multicollinearity between the variables in the regression model.

### Heteroscedasticity Test

The way to detect the possibility of the occurrence of these symptoms can be known by the *Glejser test*, namely regressing the absolute value of the residual against the independent variable. If the significance value is more than 0.05, then the results in the data can be said to not have heteroscedasticity or meet the assumptions.

Table 3  
Heteroscedasticity Test Results

| Independent Variable                    | Sig.  | Standard | Information                  |
|-----------------------------------------|-------|----------|------------------------------|
| <i>Overconfidence</i> (X <sub>1</sub> ) | 0.104 | > 0.05   | No Heteroscedasticity Occurs |
| Investment Knowledge (X <sub>2</sub> )  | 0.870 |          |                              |
| Investment Motivation (X <sub>3</sub> ) | 0.122 |          |                              |
| Risk Tolerance (X <sub>4</sub> )        | 0.592 |          |                              |

Source: SPSS Output

The heteroscedasticity test shows the significance value of each independent variable, namely the *Overconfidence variable* (X<sub>1</sub>) of 0.104, Investment Knowledge (X<sub>2</sub>) of 0.870, Investment Motivation (X<sub>3</sub>) of 0.122, and Risk Tolerance (X<sub>4</sub>) of 0.592. Where a variable can be said not to experience heteroscedasticity if the significance value is more than 0.05, it can be ascertained that the four variables do not experience symptoms of heteroscedasticity.

### Multiple Linear Regression Analysis

Table 5  
Multiple Linear Regression Test Results

| Variables                               | Unstandardized Coefficients |            | Standardized Coefficients | t      | Sig.  |
|-----------------------------------------|-----------------------------|------------|---------------------------|--------|-------|
|                                         | B                           | Std. Error | Beta                      |        |       |
| Constants                               | 3,071                       | 1,678      |                           | 1,830  | 0.071 |
| <i>Overconfidence</i> (X <sub>1</sub> ) | ,364                        | 0.074      | 0.453                     | 4,891  | 0.001 |
| Investment Knowledge (X <sub>2</sub> )  | 0.333                       | 0.088      | 0.315                     | 3,788  | 0.001 |
| Investment Motivation (X <sub>3</sub> ) | 0.185                       | 0.096      | 0.199                     | 1,922  | 0.058 |
| Risk Tolerance (X <sub>4</sub> )        | -0.049                      | 0.065      | -0.063                    | -0.759 | 0.450 |

|                           |                 |
|---------------------------|-----------------|
| R = 0.744 <sup>a</sup>    | F count = 0.848 |
| R-Square = 0.553          | F table = 2.469 |
| Adjusted R-Square = 0.533 | t table = 1.989 |

Source: SPSS Output

$$Y = 3.071 + 0.364X_1 + 0.333X_2 + 0.185X_3 + -0.049X_4 + e$$

The nature of the relationship between the dependent variable, namely Investment Decision (Y) with the independent variables, namely *Overconfidence* (1), Investment Knowledge (X<sub>2</sub>), Investment Motivation (X<sub>3</sub>), and Risk Tolerance (X<sub>4</sub>) can be seen from its coefficient. If the coefficient is positive (+) it means that the change in variable X is in the same direction as the change in variable Y, and vice versa if the coefficient is negative (-) it means that the change in variable X is in the opposite direction to the change in variable Y.

The results of the multiple linear regression test obtained an F-<sub>count</sub> of 0.848 < F<sub>table</sub> of 2.469, meaning that the independent variables including *Overconfidence* (X<sub>1</sub>), Investment Knowledge (X<sub>2</sub>), Investment Motivation (X<sub>3</sub>), and Risk Tolerance (X<sub>4</sub>) together did not have a significant effect on Investment Decisions (Y).

### Hypothesis Test (t-Test)

#### The Influence of *Overconfidence* on Investment Decisions

*Overconfidence* variable has a positive influence on investment decisions, meaning that if *overconfidence* increases, it will increase investment decisions. *Overconfidence* refers to the tendency of individuals to overestimate their abilities, knowledge, and information, which can affect the way they make investment decisions. When investors feel overconfident, they tend to ignore risks and make less rational decisions, which can negatively impact their investment results.

The results of this study are in line with those conducted (Budiman et al., 2021) which state that *overconfidence* has a positive and significant influence on investment decisions. On the other hand, the results of this study differ from those conducted by (P. A. P. Ningrum et al., 2023) those who state that *overconfidence* has no influence on investment decisions.

#### The Influence of Investment Knowledge on Investment Decisions

The variable of investment knowledge has a positive influence on investment decisions, which means that if investment knowledge increases, it will increase investment decisions. The importance of investment knowledge in financial management can be seen from the fact that investors who have a high level of investment knowledge tend to make better investment decisions. They are better able to recognize investment risks and opportunities, conduct in-depth analysis of investment instruments, and manage their portfolios more efficiently.

The results of this study are in line with those conducted (Resky et al., 2023); (Fitriasuri & Simanjuntak, 2022) which states that investment knowledge has a positive and significant influence on investment decisions. On the other hand, the results of this study differ from the research conducted by (Fitriasuri & Simanjuntak, 2022) which states that investment knowledge does not affect investment decisions.

#### The Influence of Investment Motivation on Investment Decisions

Risk tolerance variable has no effect on investment decisions. This means that if the level of risk tolerance or awareness of investment risks increases, then investment decisions for class A students of the 2021 management study program at Balikpapan University will decrease. In the discussion of the effect of the risk tolerance variable on

investment decision variables in terms of financial management, risk tolerance plays an important role in shaping the behavior and investment decisions of investors. Risk tolerance includes an individual's understanding of how much risk they can accept in investing, as well as the ability to manage the uncertainty associated with investment instruments. The results of this study are in line with those conducted (Novitasari et al., 2023) which state that investment motivation has no effect on investment decisions. On the other hand, the results of this study differ from the research conducted by (Pradipta & Yuniningsih, 2023) which states that investment motivation has a positive and significant influence on investment decisions.

### **The influence of risk tolerance on investment decisions**

Risk tolerance is the level of ability that is acceptable in taking an investment risk. Every investor has a different level of tolerance. Risk tolerance is an important factor in investing. If investors want to invest, they must have a realistic understanding of their abilities and also expectations in moving a big leap in investment value. Investors will behave differently in facing the risks that may occur in the investments they may plant. Investors should not be reckless or too relaxed in facing the risks that may arise because risk is closely related to the possibility of loss that will be obtained in investment. In this study, the risk tolerance variable does not affect investment decisions. This finding supports (Listiani & Soleha, 2023) and confirm the rejection of the findings (P. A. P. Ningrum et al., 2023).

### **Conclusion**

Based on the results of the research test on *Overconfidence*, Investment Knowledge, Investment Motivation, and Risk Tolerance on investment decisions, it can be concluded that: The variables of *overconfidence and investment knowledge partially* have a positive effect on investment decisions in class A students of the 2021 management study program, Balikpapan University, while investment motivation and risk tolerance have no effect.

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