

Analysis of Minimum Capital, Risk, and Knowledge in Affecting Students' Interest in Investing with Moderated Income in Indonesian Capital Market

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ABSTRACT

Preferences on capital, risk perception, knowledge, and rate of return are part of the factors that are analyzed for testing in making investments. This study aimed at analyzing the impact of minimum capital, risk perception, and knowledge on student interest in investing moderated by income factors. The design of this study was causally applied quantitative using primary and secondary data through the collection of 117 respondents. The sampling technique applied was the purposive sampling method adjusted by the object and criteria set. Moderated Regression Analysis (MRA) was used in testing the overall sample data and the residual test for moderating variables. The research results indicate that minimum capital factors, risk perception, and knowledge significantly affect student investment interest simultaneously at the Bandung branch. Partially, minimum capital has a significant negative effect on investment interest; meanwhile, Risk perception and knowledge positively affect investment interest. In comparison, the income factor is able to moderate the relationship between minimum capital, risk perception, and knowledge with investment interest.

Keywords: *Investment Decision, Minimum Capital, Risk, Knowledge, Income.*

1. INTRODUCTION

The current accelerated pace of investment decision which is connected with various income, risk, and literacy economic at the capital market, needs to improve and develop their business lines. Companies can try and take advantage of various facilities available. The development of a company's business will impact increasing competitiveness between companies so that every company is required to develop its strategy constantly [1].

One form of a company's strategy to improve its performance is actively participating and joining capital market institutions. The presence of this institution will have an important role in the progress of the company and the information needed by the community, both individuals and groups within a business entity. This is because investors who have excess funds can channel their funds to be invested in entrepreneurs to obtain additional funds that can be used to expand their business network through investors in the capital market [1].

This fast-paced information has changed people's views on meeting needs, especially investment-related ones. People no longer regard investment as a desire but rather a necessity [2]. The excess investment can return the principal value plus economic, social, and other benefits within a particular time, becoming an attraction for the community.

There are two paradigms prevailing in society regarding investment. First, investment is considered a want, and second, investment is considered a need. When investing is considered a desire, this means that when a person has excess money, the money will tend to be kept as savings rather than used for investment purposes. The money is only used for investment purposes when the owner desires to channel it into investment instruments. The second paradigm states that investment is considered a necessity. This means that if someone has excess money, the excess will tend to be used for investment rather than saving [2].

Investment is one of the country's development instruments to improve people's welfare, including

Indonesia [3]. The financial orientation of the Indonesian people is still in the category of short-term saving society. In contrast, developed countries whose financial orientation is long-term investment can manage finances from their income as much as 30% as an investment [4].

The level of financial literacy in Indonesia in the National Financial Literacy Survey (SNLK) shows the results of the financial literacy index reaching 38.08% and the financial inclusion index 76.19% increasing in 2019, compared to the results of the 2016 survey, which was 29.7% financial literacy and financial literacy index with financial inclusion of 67.8% [5].

In years, investment in Indonesia has increased. Table 1 below shows the total growth of Single Investor Identification (SID) for 2012-2016.

Table 1. Total Growth in the Number of SID 2012-2016

No.	Year	Number of Single Investor Identification (SID)
1	2012	281.256
2	2013	320,506
3	2014	364,465
4	2015	434.107
5	2016	891.070

Adopt from: Indonesian Central Securities Depository

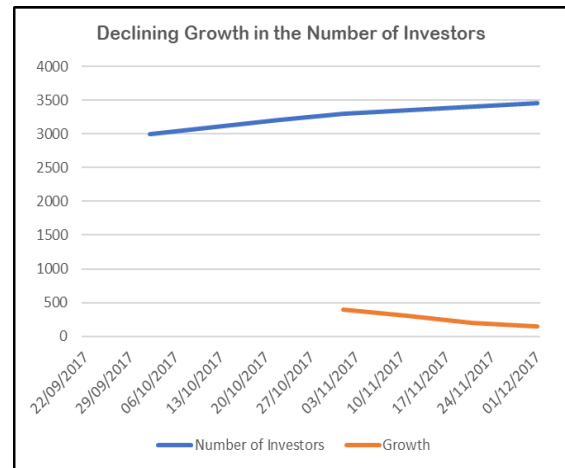
From the table, it can be seen that the number of Single Investor Identification (SID) continued to increase from 2012 to 2016. The number of SIDs recorded at Indonesian Central Securities Depository (KSEI) at the end of December 2016 had reached 891,070, or an increase of 105.27% compared to the total SID end of December 2015 was only 434,107.

However, the increase in the number of investors based on data from the company securities branch Bandung shows a different growth rate of the number of investors among young people. The growth in the number of young investors decreased by 106 people or 48.4%, from 219 in October 2017 to 113 in December 2017.

The decline of the growing number of investors at the Bandung branch is possible due to students' low motivation or interest in investing in the capital market. The low interest in students' investment in the capital market is because investment activity on the stock exchange is still relatively new in Indonesia compared to other countries. In addition to the low public interest, this is also due to the low understanding and knowledge of the community, both entrepreneurs and students, regarding investment in the capital market [6].

Basic investment knowledge is critical to be known by potential investors, especially young people. This is intended so that investors (students) avoid irrational investment practices, a culture of bandwagon, fraud, and the risk of loss. If viewed from an educational background, students should have sufficient knowledge about the capital market. Several factors can influence

students' interest to invest, including minimum capital, risk level, and basic investment literacy.



Adopt from: Indonesian Central Securities Depository

Figure 1. Declining Growth in the Number of Investors

Minimum capital is one of the factors that a person must consider before deciding to invest [1]. Minimum investment capital is taken into consideration because there is a calculation of estimated funds for investment, the minimum funds needed, the higher someone's interest in investing. Minimum capital in an investment is a discount that occurs at department stores. This discount triggers someone to shop [7]. Research by [8] and [9] states that minimum capital affects investment interest in the Islamic capital market. However, this is not in line with research [10] and [11], whose results show no minimal effect of capital factors on investment interest in the capital market.

Several considerations are made by looking at the possible risk of loss that is accepted. Research conducted by [12] stated that risk perception does not affect investment interest in the capital market. Although initially, students were interested in investing, they could stop in the middle of the road because they faced obstacles, and the same results in research by [3] and [13]. In contrast, research conducted by [14] argues that the perception of risk is significantly positively related. This is because the higher the risk, the more investment enthusiasts, hoping that the higher the risk taken, the greater opportunity.

Adequate knowledge is needed to avoid losses when investing. This will shape the behavior of investors and potential investors to invest in the capital market. The theory of planned behavior explains that a person's attitude and behavior in taking action cannot be separated from the behavior of investors making investment decisions. Research by [15] and [9] shows that investment knowledge affects interest in investing in the sharia capital market.

Research on the relationship between risk perception has been carried out regarding the effect of minimal

investment capital at BNI Securities, return, and perception of risk on student investment interest with income as a moderating variable, which stated that risk perception affects student investment interest [7]. The phenomenon of problems in this study will reveal how to increase student investment interest in the capital market through minimum capital, perceptions of risk, and investment knowledge at company securities branch office Bandung. The aim is to determine the effect of minimum capital, risk, and knowledge on student investment interest with income as a moderating factor.

1.1. Literature Review

1.1.1. Student Investment Interest

Interest is a psychological function or a conscious response to being interested in an object, either in the form of objects or the other, while investment is defined as a commitment to a number of funds or other resources currently carried out to obtain future profits [16]. Investment interest is a strong desire or desire in someone to learn all things related to investment to the stage of practicing it, namely investing [1]. Characteristics of someone interested in investing can be known through his efforts in finding the type of investment instrument from the advantages, weaknesses, and investment performance. Then, they invest according to what they have learned to increase the portion of the weight of the existing investment [17].

1.1.2. Minimum Investment Capital

Minimum investment capital is the initial capital used in making investments by potential investors [18]. The company securities offer initial funds that must be deposited to create an account, only IDR 100,000.00. The minimum purchase amount determined by Indonesia Stock Exchange is one hundred shares, and the minimum price is Rp.50.00 per share, so the minimum investment is Rp.5000.00.

1.1.3. Risk Perception

Perception is an experience generated through the senses of sight, hearing, smell, and others which is indicated by a change in behavior in a person. Perceived risk is defined as the uncertainty faced by investors when they cannot predict the impact of purchasing or investment decisions [19]. Risk perceptions are socially shaped due to several factors that form the basis for differences in decision-making regarding possible losses [20].

1.1.4. Investment Knowledge

Investment education is the perception of knowledge or knowledge that has been conveyed, either to students

through universities or from external parties, regarding investment in the capital market [18]. Investment knowledge is an understanding that one must have about various aspects of investment, starting from basic knowledge of investment appraisal, the level of risk, and the rate of return on investment [1].

1.1.5. Income

Income is defined as additional economic capacity received or obtained from each business, both goods and services. Comes from within or outside Indonesia, which can be used for consumption or to increase one's wealth with any name and in any form (Law No.17 of 2004). Individuals with lower income levels tend to prefer low-risk investments. However, if income increases, the risk tolerance for other investments will decrease, so riskier investments will be made [21].

1.1.6. Research Framework

The research framework was developed by the researcher based on the phenomena and research objectives that were analyzed simultaneously or partially, as shown in Figure 2 below:

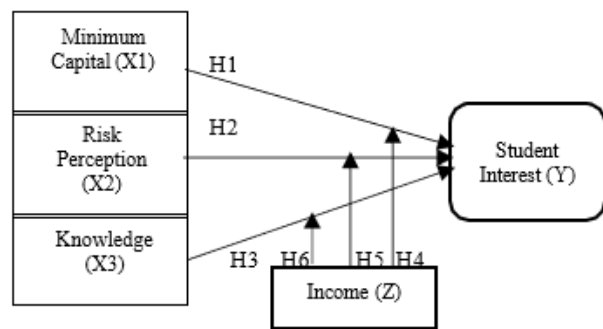


Figure 2. Research Framework

The proposition is an expression or statement that can be trusted, denied, or tested for the truth about a concept/construct that explains and predict a phenomenon. Minimum capital variables, risk perception, and knowledge can be used as factors in determining the alleged influence on student interest as investors and testing income factors that can moderate the relationship between research variables.

Based on this description, the research hypothesis is as follows:

1. Minimum capital, risk perception, and knowledge affect student interest in investing either simultaneously or partially in the Bandung branch of company securities.

2. Income moderates the relationship between minimum capital, risk perception, and knowledge with student interest in investing in the Bandung branch of company securities.

2. METHODS

The population of this study came from all students who opened securities accounts at the Bandung branch of Phintraco Securities. The total population who opened securities accounts through the agency from 2017 to 2020 was 463 students. Meanwhile, the number of returned questionnaires that have been distributed is 117 active students. Considerations in determining the sample are students who are still active in college and conduct stock buying and selling transactions at least four times a month.

The variables are Minimum Capital (X1), Risk Perception (X2), Knowledge (X3), and Income (Z). The following is an explanation of the operational table of variables and their measurements:

Table 2. Operationalization & Measurement of Variables

Variable	Indicator	Scale
Student Interest (Y)	- Find out about the investment concept - Study investment - Knowing the type of investment	interval
Minimum Capital (X1)	- Minimum investment capital - The amount of capital to open a securities account - Ease of opening a securities account	interval
Risk Perception (X2)	- Risk considerations - Losses on transactions - Perception of high risk & high return	interval
Knowledge (X3)	- Knowledge of investment experience - Basic knowledge of investment stocks - Understanding the level of risk and return	interval
Income (Z)	- Income amount - Set aside income - Calculating income level	interval

Adopt from: Processed by Researchers, 2021

The dependent variable in this study was Student Interest (Y). Meanwhile, the independent variables were minimum capital, risk perception, and knowledge. The data analysis methods in this study are data qualitative tests (validity and reliability tests), descriptive statistics, multiple regression analysis (multiple regression analysis), and residual tests for moderating variables. The data of this study were processed using the Statistical Package for Social Science (SPSS) 21 program. Multiple regression analysis intends to predict the dependent variable associated with two or more independent variables.

Model I: $Y = 0 + 1 X1 + b2 X2 + b3 X3 + e$ (1)
 Model II: $Z = b0 + b1 X1 + b2 X2 + b3 X3 + e$ (2)

$|e| = b0 + b1 Y$

Information:

- Y = Student Interest
- b0 = Intercept
- b1 = Minimum Capital Regression Coefficient
- b2 = Risk Perception Regression Coefficient
- b3 = Knowledge Regression Coefficient
- X1 = Minimum Capital
- X2 = Perception of Risk
- X3 = Knowledge
- Z = Income
- e = Error

The normality test aims to predict the test of distribution data on the normality of regression model and residual variables. This testing process applies the Kolmogorov-Smirnov (KS) non-parametric test, graphical analysis, and statistical test.

The F test & t-test + Residual test (as moderating) were used to test the hypothesis.

1. F Uji test. The F statistic test shows that all independent variables included in the model simultaneously affect the dependent variable. The steps are as follows:

Ha: 0, then the minimum investment capital, risk perception, and knowledge affect the investment interest of students simultaneously at company securities branch Bandung.

2. t-test. The t statistic test estimates how much the independent variable individually (partial) can explain the variation in the dependent variable. The steps are as follows:

Ha: 0, then minimum investment capital, risk perception, and knowledge partially influence student investment interest at company securities branch Bandung.

3. Residual test (Moderating)

The residual test examines the effect of deviation from a regression model by looking at the Lack of Fit (mismatch) indicated by the residual value. The steps in deciding for the residual test are:

Ha: 0, then income is able to moderate the relationship of minimum capital, risk perception, and knowledge have an effect on student interest at company securities branch Bandung.

The residual test criteria are P-Value (Sig) < 0.05, and the parameter coefficient is negative so that it can be moderated. However, if the P-Value (Sig) > 0.05 and the parameter coefficient value is positive, it cannot be moderated.

3. RESULTS AND DISCUSSION

The descriptive statistical analysis in the table below uses several questions as instruments and is assessed with

a 5-point Likert scale, namely 1 (strongly disagree) to 5 (strongly agree) for all variables in this study, obtained answers to a minimum, maximum, average, and standard deviation as follows:

Table 3. Description of Research Variables

Descriptive Statistics					
	N	Minimum	Maximum	mean	Std. Deviation
Y	117	12.00	17.00	12.3457	1.56653
X1	117	9.00	15.00	11.7407	1.46934
X2	117	8.00	14.00	10.5802	1.68719
X3	117	8.00	14.00	10.2222	1.73649
Z	117	7.00	15.00	11.3704	1.8709
Valid N (listwise)	117				

Adopt from: Data processed, 2021

Based on descriptive statistics, the number of research samples (N) is 117 respondents. Each variable has a minimum, maximum, average, and standard deviation that varies according to each respondent's perspective and level of understanding.

After all research samples are tested for validity and reliability so that the results are valid & reliable, the next step is to test normality through non-parametric statistical test techniques "Kolmogorov-Smirnov (KS)" which results can be seen below:

Table 4. Normality Test of Research Variables

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		117
	mean s, b	1.0611
Normal Parameter		
	Std. Deviation	,80945
	Absolute	,148
Most Extreme Differences		
	Positive	0.079
	negative	-,131
Kolmogorov-Smirnov Z		
		1,261
Asymp. Sig. (2-tailed)		
		,152

- a. Test distribution is Normal.
- b. Calculated from data.

Adopt from: Data processed, 2021

The test results of Kolmogorov-Smirnov Z value of 1.261 and the significance of 0.152 the value is greater than = 0.05 (Asymp. Sig = 0.152 > 0.05) so that the Ho hypothesis was accepted, which means the residual sample is normally distributed.

3.1. F test statistic

The F statistic test shows that independent variables included in the equation model simultaneously affect the

dependent variable. The results of the F test are shown in the following table:

Table 5. F Test Results

ANOVA a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	118.147	5	23.019	32,257	.000b
	Residual	35,624	111	.483		
	Total	152.421	116			

- a. Dependent Variable: Y
 - b. Predictors: (Constant), X1, X3, X2
- Adopt from: Data processed, 2021

Based on table 5, the results obtained a significance value of 0.000 which is smaller than 0.05 so that it can be stated that simultaneously, minimum capital variables, risk perception, and knowledge affect student interest in investing at company securities branch Bandung.

3.2. Statistical t-test

The t-statistical test shows how much influence each independent variable has individually (partial) in explaining the variation in the dependent variable. The results of the t-test can be seen in the following table:

Table 6. T-Test Results

Coefficients a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.428	.873		2,147	.005
	X1	-.143	.350	-.143	-2.038	.045
	X2	.516	.435	.471	3,452	.000
	X3	.326	.367	.238	2.157	.000

- a. Dependent Variable: Y
- Adopt from: Data processed, 2021

Based on table 6, it is known that individually (partial) shows that minimum capital, risk perception, and knowledge variables have a p-value (sig) less than 0.05. This means that it can be stated that variables of minimum capital, risk perception, and knowledge have a significant effect on student interest in investing at company securities branch Bandung. The variables of risk perception and knowledge are stated to have a positive and significant effect on student investment interest. In contrast, the minimum capital has a negative and significant effect on student interest in investing at the company securities branch Bandung

3.3. Residual Test (Moderating)

A residual test is conducted to determine which elements in this moderating variable can strengthen or weaken the influence of the independent variable on the dependent variable. The results of this test can be seen in the following table 7 & 8.

Table 7. Residual Test Results (Moderating)

Model		Coefficients a			t	Sig.
		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta		
1	(Constant)	-1.124	1.105		-2.037	.282
	X1	.035	.025	.054	1,296	.174
	X2	.401	.263	.241	1.568	.062
	X3	.137	.179	.193	2.175	.039

a. Dependent Variable: Moderating
Adopt from: Data processed, 2021

Table 8. Residual Test Results (Moderating)

Model		Coefficients a			t	Sig.
		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta		
1	(Constant)	2.451	.642		3.523	.002
	Y	-.184	.037	-.486	-2,319	.011

a. Dependent Variable: Moderating
Adopt from: Data processed, 2021

The following shows the equation of the residual test results as shown in the residual output analysis in tables 7 and 8:

$$Z = -1.124 + 0.035X1 + 0.401X2 + 0.137X3$$

$$|e| = 2.451 - 0.184 Y$$

Table 8 describes a significant value of 0.011, smaller than = 0.05, with a negative parameter coefficient value of -0.184. This suggests that the income variable can moderate the relationship between minimum capital, risk perception, and knowledge with the variable of student interest in investing.

3.4. Comprehensive Discussion

The results of statistical analysis state that, simultaneously, minimum capital variables, risk perception, and knowledge significantly affect student interest in investing at company securities branch Bandung. While the results of partial analysis state that the perception of risk and knowledge each has a positive and significant effect on student interest, in contrast to the minimum capital, which has a negative but significant effect on student interest in investing. The overall residual analysis states that the income variable moderates the relationship between minimum capital, risk perception, and knowledge with student interest in investing at the company securities branch Bandung. This indicates that student investors think that even though their income has increased, it does not make them think about increasing their investment. This could have happened because there are other factors that were also essential to consider in making investment decisions, in addition to the income factor [11].

4. CONCLUSIONS

Investment decisions today are something that is a necessity for every individual in order to increase valuable assets and dream of prosperity in the future. However, many factors trigger the act of making investment decisions. The factors in this research study have only been partially applied from the many other factors that impact student interest in making investment decisions. The results of the analysis of this research study are expected to add scientific insight in the field of stock investment and presumably to deepen other factors on student interest in investing in stocks. It can be further explored with other variables.

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