

The Effect of Financial Literacy and Income on Investment Decisions (Case study on employees of PT. Scientific Indotek)

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Abstract

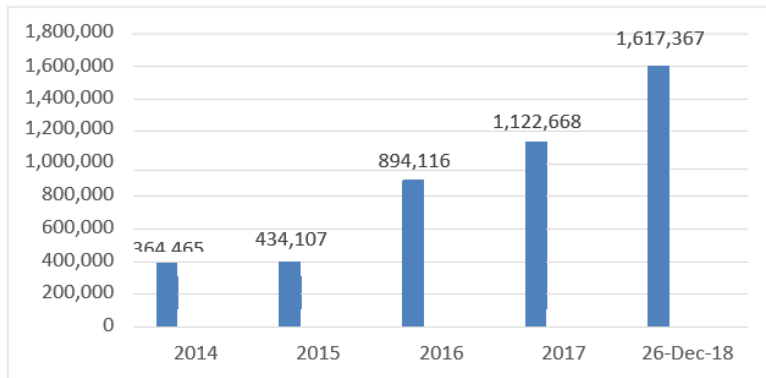
This research is a quantitative research with descriptive analysis which aims to determine the effect of financial literacy and income on investment decisions. Good financial literacy can help in investment decisions from illegal investments or fraudulent investment portals and thus income becomes a benchmark for the ability to make the best investment decisions for the future. In this study the population is the number of permanent employees at PT. Indotech Scientific with 30 research respondents. Data collection is done by distributing google forms to respondents. The research technique uses non-probability sampling through a purposive sampling approach. In data analysis assisted by using SPSS version 25. This research applies to multiple regression analysis, t test, F test and coefficient of determination to test financial literacy and income on investment decisions. Based on statistical tests that have been carried out, it is found that financial literacy and income have a positive and significant effect on investment decisions for employees of PT. Indotech Scientific.

INTRODUCTION

Developments in the era of digitalization as it is today, all the necessities of life are very developed. In the current portfolio, it is required to carry out financial arrangements properly considering price fluctuations that tend to rise and inflation. Financial management activities must be carried out carefully how decisions on the funds used can be generated from these activities. In these conditions it is necessary to have knowledge and insight into financial management. Good financial management does not escape financial literacy. Good financial literacy can be taken into consideration in determining needs, expenses and cost allocation. In addition, knowledge and understanding must be possessed by each individual, this can maximize the use of existing financial instruments and products so that the right decisions can be made by the individual. One of them is to carry out investment activities that can improve a person's standard of living.

Investment is an activity in the economy by investing directly or indirectly, so that the owner of the capital has the hope of getting a profit from the invested capital. There are many sectors in investment, including the real sector, the banking sector, to the capital market. The development of today's era requires every individual to have an awareness of the importance of investing. With a person's high ability to manage finances, he will be very selective in making investment decisions. The following is data on the growth in the number of Single Investor Identification (SID) in 2014-2018 in Indonesia.

Figure 1 . Growth in the Number of Single Investor Identification



Source: data processed by researchers, 2022 (PT Kustodian Sentral Efek Indonesia 2018)

Based on the data above, it can be seen that the willingness of the Indonesian people to invest is very large. With a value of 1,613,165 which states the number of Single Investor Identification (SID), where this value describes a growth of 44%. This value is recorded at KSEI in the form of Debt Securities, Government Securities (SBSN), Mutual Funds, Investor Shares and other Securities which are part of the number of Single Investor Identification (SID). With details, the share assets are 851,662 SID, then the Mutual Fund asset value is 988,946 SID and the composition of Government Securities is 195,119 SID. On December 26, 2018, the number of assets in C-BEST was dominated by local investors as their owners with a percentage figure of 54.71%. This figure shows an increase from the previous year from the value of 54.50% in local ownership. The increase in investors is none other than the result of government education or the ability of individual investors to carry out financial literacy. While other factors that influence the investment in funding is the income factor. Income is one indicator that is a measure of a person's welfare. A person's income is the value of a person's income earned through a certain period of time both daily, weekly, and even monthly for his work performance. With income with more value than individuals, more responsible financial behavior is seen in these individuals, this is because fund ownership is more of a basis for financial behavior in managing their finances (Kholilah & Iramani, 2013).

Employees are workers who sacrifice time and services to get compensation for their services in the form of money. The accumulation of money earned every month needs to be managed financially. Moreover, permanent employees on fixed income even more every month. In managing the money received every month it will be useful in the future, for example making an investment. According to Tandelilin (2010: 1) a person's current commitment to many funds or other resources to obtain many benefits in the future. There are two factors that can measure investment decisions, namely the rate of return, risk, and time period (Budiarto & Susanti, 2017). Meanwhile, according to Tandelilin (2010: 1) the return, risk, and the relationship between the level of risk and return expectations become the basics in investment decisions. With the investment decision factors, it can be used as an alternative reference which is the best investment decision to choose.

Based on the results of the pre-survey on several respondents regarding the dimensions that influence investment decisions, questions were spread by containing 4 variables, namely

the dimensions of financial literacy, financial behavior, technology and income. And here are the results of the pre-survey as follows:

Table 1 . T he R esults of T he P re- S urvey

Question	Variable	Score	Percentage
The importance of experience in personal financial management	Literacy	9	45%
A person's income affects the investment preferences that attract him to choose	Income	6	30%
The sophistication of today's technology affects people in droves to diversify their investments	Technology	3	15%
The attitude of investors to gain investment success	Behavior	2	10%

Source: Processed data (2022)

Based on the results of the pre-survey above, the assumptions of a number of employees regarding an investment cannot be separated from financial literacy and income. Where it can be seen that financial literacy has the highest score of 45% with 9 respondents and on the income variable dimension it has a score of 30% with 6 respondents and two other dimensions below it. Based on two variables that get high significance from the pre survey, this research will lead to financial literacy and income on investment. This pre survey was conducted on the ranks of employees including staff and support lines at PT. Indotech Scientif and partners. PT. Indotech Scientific is located at JL. Raya Pondok Gede No. 5 East Jakarta, which has been operating for decades and is engaged in the laboratory and medical equipment. Many permanent employees serve as accomodating human resources in their business operations. Many offers are also investment visits to the company. As a form of anticipation of fraudulent investment practices, it is necessary to socialize the importance of understanding literacy and how to optimize income for investment. There are many victims with the current boom in fraudulent investments. The current high interest in investment is often used as an opportunity by some people to commit fraud. From 2007 to 2017 the Financial Services Authority (OJK) recorded losses caused by this fraudulent investment reaching 105 trillion rupiah. The victims were almost from all walks of life such as civil servants, private employees, officials, and housewives. The problem is that until now, many people, especially housewives, still don't understand investing until they are finally deceived because they are attracted by unreasonable profit offers, which are also known as illegal investments or fraudulent investments. This statement is reinforced based on data from the Financial Services Authority (OJK) and financial literacy is one of the main causes.

The importance of financial literacy is to force someone to be able to make the best use of their financial knowledge so that they are not wrong in making financial decisions (Kartawinata and Mubaraq, 2018). Houston (2010) explained that financial literacy has two dimensions, namely individual financial insight and also financial education at managing their finances as well as possible. The important goal of financial literacy is to educate the public to be careful in managing finances so that the lack of financial knowledge can be overcome. Robb and Woodyard (2011) explain that if someone has good financial behavior it is caused by a good level of financial literacy as well. And the following is the income that is accumulated every month by optimizing investments for the future when you retire or risk layoffs.

From the phenomena and results of the pre-survey above, the researcher will examine in more depth the "Effect of Financial Literacy and Income on Investment Decisions for Employees of PT. Indotech Scientific.

LITERATURE REVIEW And HYPHOTESIS

Behavioral Finance

These psychological factors are even considered to be able to cause investors to do things that are irrational and unpredictable. Sometimes emotions, traits, knowledge, preferences, and various kinds of things inherent in humans underlie the emergence of decisions in action. Behavioral Finance is the study of how individuals actually behave in making financial decisions, in particular that studies how psychology influences investors' investment decisions (Risman et al., 2021).

Investment Decision

Investment is a delay in current consumption to be included in productive assets for a certain period of time (Hartono, 2016; 5). An investment decision is a policy or decision taken to invest in one or more assets to gain profits in the future (Anjani, 2012).

Financial Literacy

Financial literacy includes concepts starting from awareness and understanding of financial products, financial institutions and financial concepts and concepts regarding financial skills such as the ability to calculate compound interest payments as well as more general financial skills such as money management and financial planning (Lisa Xu and Bilal Zia, 2012).

That if an investor has sufficient and correct understanding of investment instruments, the investor will be able to make the right investment decision. Therefore our first hypothesis is as follows:

H1: Financial literacy has a positive effect on investment decisions.

Income

Revenue is an increase in assets or a reduction in liabilities originating from the delivery of goods or services in the context of the company's commercial activities (Sammryn, 2016:57).

That the higher a person's income, the easier it will be for him to make investments. Therefore our second hypothesis is as follows:

H2: Income has a positive effect on investment decisions.

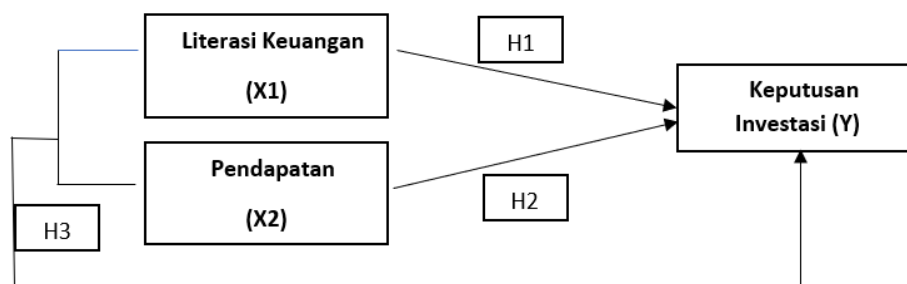
Someone who has knowledge about investment products and also has sufficient income, the person concerned will be better at making investment decisions, therefore our next hypothesis is as follows:

H3: Financial literacy and income simultaneously have a positive effect on investment decisions.

Conceptual Research

The following is the framework of this research as follows:

Figure 2. Research framework



Source: data processed by researchers, 2022

METHOD

This research is quantitative and categorized as study descriptive which is used to describe the variable literacy finance, income and investment decision variables as well as see connection between these variables. In this research, there are three variables, namely financial literacy (X1) and income (X2) as variable free and variable investment decisions as the dependent variable (Y) . Population on study this is a number of employees of PT. Indotech Scientific. Method The sampling used is a nonprobability sampling technique with a purposive sampling approach with criteria that are new or old permanent employees. Number of samples in this study that is amount 30 respondents in it use calculation formula slovin

Data measurement uses a Likert scale, because it is in the form of response respondents, In test is statements on questionnaire the worthy in defining a variable, then conducted a validity test. Temporary that, questionnaire considered reliable if the respondent's answer to statement consistent in different time.

Next, the analysis technique is carried out data with descriptive statistics, partial hypothesis test (t test) and variable simultaneous test (F test). Following this is form statistics on research this:

$$Y = a + bx_1 + bx_2$$

Information:

- Y : Investment decision
- a : Constant value
- b : Coefficient
- X1 : Financial Literacy
- X2 : Income

RESULTS AND DISCUSSION

Results

The following is a calculation from the analysis of respondents' answers from the X1 variable, namely Financial Literacy from 30 respondents as follows:

Table 4. Respondents' Answers on Financial Literacy Variables (X1)

Dimension	Score	Percentage (%)	Ideal Score	Percentage Average Score
Behavior (X1.1)	144	96.0%	150	91%
Skills (X1.2)	136	90.7%		
Knowledge (X1.3)	141	94.0%		
Attitude (X1.4)	125	83.3%		

Source: Data processed by researchers, 2022

Judging from table 4 above, the answers to 30 respondents on the questionnaire distributed regarding the Financial Literacy variable (X1) which consists of 4 indicators or dimensions, namely *behavior* , *skills*, *knowledge* and *attitude* , the highest suspension is obtained on the behavioral dimension , namely the percentage is 96% with the total score is 144, where the questionnaire statement is X1.1 "*Financial literacy can increase individual awareness in managing financial decisions*". Meanwhile, the lowest score percentage is 83.3% with the statement "*The way a person behaves has an impact on their financial well-being, for example in budgeting, savings and insurance*". Judging from the score and the highest percentage of 96% is in the category of strongly agree or the highest score. The ideal score on the 4-dimensional variable above is 150. And the average percentage of the total score is 91%

which is in the category of strongly agree or high. From the highest dimension, namely *behavior*, it shows that knowledge, understanding of financial literacy is very much needed and influences a decision.

While the answers of 30 respondents on the Income variable (X2) are as follows:

Table 5. Respondents' Answers on Income Variables (X 2)

Dimension	Score	Percentage (%)	Ideal Score	Percentage Average Score
Earnings per month (X2.1)	128	85.3%	150	88.2%
Jobs (X2.2)	129	86.0%		
Budget (X2.3)	138	92.0%		
Family Burden (X2.4)	134	89.3%		

Source: Data processed by researchers, 2022

Judging from table 5 above, the answers to 30 respondents on the questionnaire distributed regarding the Income variable (X2) which consists of 4 indicators or dimensions, namely monthly income, work, budget and family burden, the highest suspension is obtained on the budget dimension. that is, the percentage is 92% with a total score of 138, where the questionnaire statement is X2.3 *"A budget that is adjusted to the priority scale of needs is very effective and efficient in financial needs"*. Meanwhile, the lowest score percentage is 85.3% with the statement *"Income received every month can be properly budgeted for the management of needs"*. Judging from the score and the highest percentage of 92% is in the category of strongly agree or the highest score. The ideal score on the 4-dimensional variable above is 150. And the average percentage of the total score is 88.2% which is in the category of strongly agree or high. From the highest dimension, namely the budget, it shows that the adjustment of the priority scale of the needs of the income obtained is very meaningful for saving conditions and influences in making a decision. The right budget can be set aside income and the income that is set aside can be used as savings or a form of investment.

Furthermore, based on the answers of 30 respondents on the investment decision variable (Y) as follows:

Table 6. Respondents' Answers on Investment Decision Variables (Y)

Dimension	Score	Percentage (%)	Ideal Score	Percentage Average Score
Return (Y.1)	129	86.0%	150	84.7%
Risk(Y.2)	122	81.3%		
Relationship between Return and Risk (Y.3)	130	86.7%		

Source: Data processed by researchers, 2022

Seen from table 6 above, the answers to 30 respondents on the questionnaire distributed regarding the Investment Decision variable (Y) which consists of 3 indicators or dimensions, namely return, risk and the relationship between return and risk, the highest suspension is obtained on the dimension of the relationship between return and risk. risk is the percentage of 86.7% with a total score of 130, where the questionnaire statement is Y.3 *"That investment decisions are symmetrical on the causality of profit margin expectations and investment risk"*. Meanwhile, the lowest score percentage is 81.3% with the statement *"Rational investment portfolio that avoids or invests minimal risk or manages existing risks"*. Judging from the score and the highest percentage, 86.7%, it is in the category of agree or high score. The ideal score

on the 3 dimensional variables above is 150. And the average percentage of the total score is 84.7% which is in the agree and high category. From the highest dimension, namely the relationship between return and risk, it shows that there is an equivalent relationship in investment decisions between the rate of return (return) and the level of deviation (risk).

To examine the effect of financial literacy and income on investment decisions, the researcher conducted multiple linear regression tests. Before performing the regression analysis, the researcher first tested the classical assumptions, namely the normality test and the heteroscedasticity test. The normality test was carried out to determine whether the residual value was normally distributed and if the residual value was normally distributed, it had a good regression model (Priyatno, 2016). In this study, the researcher used the Kolmogorov Smirnov method with the criteria used if the significance value < 0.05 then the data was not normally distributed while if the significance value was > 0.05 then the data was normally distributed (Indrawati 2015). Kolmogorov Smirnov's normality test results show the Asymp value. Sig. (2-tailed) which is 0.200 or greater than the significance value of 0.05, it can be stated that the overall data in this study is normally distributed and has a good regression model. Furthermore, referring to the results of the Normal PP Plot graph, the results obtained are the points spread around the line and follow the diagonal line so that the data can be said to be normally distributed.

To prove whether the regression model has residual variance that is not the same in all observations, a heteroscedasticity test and a good regression model are carried out when there is no heteroscedasticity (Priyatno, 2016). In this study, the heteroscedasticity test was carried out using the Spearman's rho test. If the significance value is greater than 0.05, it can be concluded that there is no heteroscedasticity, whereas if the significance value is less than 0.05, it can be concluded that there is heteroscedasticity (Indrawati 2015). The results of the heteroscedasticity test show that the residual value has a value of 0.434 where the value of 0.434 is greater than 0.05 so it can be stated that there are no symptoms of heteroscedasticity in this study.

Furthermore, the hypothesis test is carried out, namely there is at test and an F test. The t test is carried out partially, namely to determine the effect of financial literacy on investment decisions and to determine the effect of income on investment decisions. Meanwhile, in the F test, all variables are tested simultaneously or together. In this case to determine the effect of financial literacy and income on investment decisions.

The following is a table of t-test results in this study as follows:

Table 7. t Test Result

Model	t	Coefficients ^a		Collinearity Statistics	
		Sig.		Tolerance	VIF
1	(Constant)	,176	,861		
	X1	2,762	,009	,537	2,862
	X2	4,591	,000	,554	2,806

Source : data processed by researchers by SPSS Vers. 25, 2022

Seen from table 7 above, the results of the t test show that the t count on the X1 variable (financial literacy) is 2.862 where the value is greater than the t table which is 2.055 and obtained a significance value of 0.009 which is smaller than 0.05, then H0 is rejected and H1 is accepted. So that it can be concluded that financial literacy has a significant effect on investment decisions. Then, on the results of the t-test of the X2 variable (Income) the t-count value is 2.806 which is greater than the t-table of 2.055 and the significance value is 0.000 less than

0.05, then H0 is rejected and H1 is accepted. So that it can be concluded that income has a significant effect on investment decisions.

The following are the results of the F test from this study as follows:

Table 8. F Test Result

ANOVA ^a		
Model	F	Sig.
1 Regression	31,904	,000 ^b

Source : data processed by researchers by SPSS Vers. 25, 2022

31.904 are greater than F table which is 2.960 and obtained a significance value of 0.000 less than 0.05, then H0 is rejected and H1 is accepted. So, it can be concluded that financial literacy and income have a significant effect on investment decisions.

Next is the coefficient of determination test. The following are the results of the KD test as follows:

Table 9. Determinant Coefficient Test Results

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,794 ^a	,631	,611	2.25119

Source : data processed by researchers by SPSS Vers. 25, 2022

Seen from table 9 above, it shows that the analysis of the coefficient of determination is carried out to measure how much the contribution of the independent variable (X1), namely Financial Literacy, and X2, namely Income to the dependent variable (Y), namely Investment Decisions. From the results of calculations based on the coefficient of determination formula, the results are 63.1%, this means that the influence of financial literacy and income on investment decisions is 63.1% and the remaining 36.9% is influenced by other variables outside of this study.

Discussion

After the results and discussion, it can be drawn a result and suggestions. The results and suggestions are as follows:

1. The Effect of Financial Literacy on Investment Decisions

The results of this study indicate that financial literacy has a positive and significant effect on investment decisions. Where the value of the t-statistic test results (in table 7) t arithmetic (2.862) is greater than the t table (2.055) and obtained a significance value of 0.009 less than 0.05, then H0 is rejected and H1 is accepted. This positive influence indicates that the greater a person's financial literacy, the better a person's financial behavior will be. Meanwhile, the significance effect shows that the respondent has a high level of financial literacy because the respondent is an employee, where employees must have a level of financial literacy and understanding in order to have the skills, motivation, and confidence to apply their knowledge and understanding in order to make investment decisions. Financial literacy is an effective way to improve financial well-being and participate in the economy.

This is also symmetrical in previous research, namely Hamidi (2019) which states that Financial Literacy is closely related to personal financial management, including investment

decision making, funding, and good asset handling. In addition, Artina & Cholid (2018), and Fachrudin & Fachrudin (2016) also state that financial literacy has a significant positive effect on investment decisions.

2. The Effect of Income on Investment Decisions

The results of this study indicate that income has a positive and significant effect on investment decisions as in the results of the t-statistical test (in table 7) that t count (2.806) is greater than t table (2.055) and the significance value is 0.000 less than 0.05, then H_0 is rejected and H_1 is accepted. This positive influence shows that the high income received by employees, especially those employees with permanent status, the high welfare value obtained so that the budget allocation for investment decisions can be allocated and has an understanding of the importance of saving by investing for the future or retirement.

The results of previous research by Amelia Apriyanti and Rifka Ramadita (2022) stated that income has a positive and significant effect on investment decisions and is symmetrical in the results of research conducted now.

3. The Effect of Financial Literacy and Income on Investment Decisions

The results showed that financial literacy and income had a positive and significant effect on investment decisions. Where it can be seen in table 8 of the F-statistical test that the results of the F test on the calculated F of 31.904 are greater than the F table of 2.960 and obtained a significance value of 0.000 less than 0.05, then H_0 is rejected and H_1 is accepted. This shows that the importance of applying financial literacy and income in understanding, budgeting in investing, financial management, competence and in this way can participate in the economy. This is symmetrical in previous research, namely by Arianti (2018) that financial literacy and income have a positive and significant effect on investment decisions.

Thank-you note

I am convey my appreciation to Mercubuana University. In addition, I would like to thank my supervisor and all respondents who have helped me to collect research data.

Suggestion

In connection with the results of this study, the researcher will provide some suggestions that are: may be useful for other researchers or for further research, namely by taking wider sample so that it can strengthen and complement previous research. For increase the number of respondents, so that the results obtained are more accurate and can strengthen research result. As well as adding research variables such as insurance, financial efficacy, or other factors that can influence investment decisions. Furthermore, the researcher suggests that future researchers for the object of research can diversify in the management, or education fields such as lecturers or students so that it can also be seen how the level of financial literacy, income and investment decisions in other ranks or fields in managing their finances.

Researchers suggest that employees can increase their knowledge about investment by increasing their literacy through the internet about various types of investments and their risks, besides that, one of them is attending seminars related to investment or can also join the online community of investors so that they can exchange information about investment. And to the government, the researchers would also like to suggest that they can work together with financial institutions to participate in increasing the exposure of information related to knowledge about risks and returns on investment to the public as well as providing an official website that is easy to access which contains information about various types of complete investment providing education through communities formed by investors.

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