Young Adults' Investment Decisions in Surabaya: The Influence of Financial Literacy and Risk Perception

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Abstract

Important investment decisions allocate an investor's assets in light of further consideration. As youthful investors have dominated the investor population in recent years, investors should be cautious of the elements that influence investment decisions. Despite its significance, few or no studies have examined the influence of financial literacy and risk perception on investment decisions among young adults in Surabaya. This study seeks to determine the impact of financial literacy and perception of risk in investment decision-making, specifically young adults in Surabaya, both simultaneously and individually. By distributing questionnaires to a total of 89 respondents, a basic random sampling method was utilized. Then, IBM SPSS Statistics is used to conduct a multiple Linear regression analysis on the data. The findings demonstrated that financial literacy and risk perception have a significant positive relationship with the investment decisions of young adults in Surabaya, both concurrently and separately. In addition, this research enables young adults in Surabaya to comprehend their investment decision, allowing them to comprehend the factors that influence it and obtain useful benefit.

Keywords: Investment decision; risk perception; financial literacy.

Introduction

As productivity increases overtime, there is a rise in household incomes, which lead to a growth in discretionary income. Following this growth is the demand for financial products that give investors extra protection of their valuable goods, better life insurances, and better retirement plans (Zytek, 2019). The competence of a household or an individual in managing their financial resources, which include budgeting, insurance as well as investment, is the definition of financial behavior (Hasibuan et al., 2018). In other words, financial behavior is about the action of a person during the financial decision-making process. Furthermore, it discusses a wide range of financial products and services which includes saving, spending, borrowing as well as investing (Naidu, 2018). Investment activities have the probability to generate any undesirable or unexpected situations happening that will alter the profitability prospect for a given investment. Investment activities do not guarantee returns as there is always a possibility of experiencing loss and it is called the risk. Risk perception can be defined as a person's subjective way of interpreting or judging possible risks. Besides, risk perception reflects a person's thought or perspective on taking risks or uncertain results. An investor with a high-risk perception typically resist allocating funds for high risk investment assets. On the contrary, an investor with low risk perception prefers to invest in high risk investment assets (Hariharan et al., 2000).

To be able to choose the appropriate financial product, one must learn the financial skills necessary or, in other words, financial literacy. The definition of financial literacy is being able to manage one's cash and payments, having knowledge regarding savings and credits, basic understanding of health and life insurance as well as planning for financial needs in the future (Zait & Bertea, 2014). Financial literacy is important in Indonesia as financial services

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might be flourishing in the country ("Deloitte: Digital Financial Services in Indonesia," 2020). Financial Services Authority (*Otoritas Jasa Keuangan*) stated that Indonesia's financial literacy was 38.03% in 2019 ("Survei Nasional Literasi Dan Inklusi Keuangan 2019," n.d.). Moreover, financial literacy has long-term goals for all social groups in Indonesia. For example, enhancing people's understanding of financial aspects, so they can be well literate and increasing the number of users of financial products and services ("OJK: Literasi Keuangan," n.d.). For Indonesians to determine financial products or services suitable for their needs, they must understand its benefits, risks, rights, and obligations. They must also be aware that the selected financial products or services could improve their welfare. However, Indonesia's index for the availability and equality of opportunities of accessing financial services was 76.19% in 2019 ("Survei Nasional Literasi Dan Inklusi Keuangan 2019," n.d.). It indicates that Indonesian people have the access to financial services, but they do not have the requisite expertise, knowledge, or behavior that are required for making financial decisions and achieving individual financial well-being. Indonesians are enthusiastic about investing in gold (Cahyadi, 2020) as gold is categorized as a safe investment due to its stable value or even increasing over time (Pribadi, 2021). According to Muhammad Assad, the CEO & Co-Founder of Tamasia, Indonesians have begun to move some cash into gold starting from the middle of 2020 ("Investasi Emas Masih Tetap Menjanjikan Di Tahun 2021," 2020). Furthermore, the climate for property investment in Indonesia is currently highly favourable which is reflected in the property investment realization that reached IDR 76.4 trillion in 2020 (Petriella, 2021).

The researchers intended to evaluate the impact of financial literacy and risk perception towards investment decisions in financial products of young adults since Indonesian government is starting to encourage the young generation to start investing and one of the reasons behind this is because the Indonesian young generation will play a huge role in running Indonesia's capital market within the next 30 years (Kencana, 2018; Yuniartha, 2019). In fact, the IDX stated that young investors in Indonesia, who are until the age of 40, account for 70% of investors ("Tutup Tahun 2020 dengan Optimisme Pasar Modal Indonesia Lebih Baik," 2020). Out of the many provinces in Indonesia, East Java, Based on Indonesian Central Securities Depository (KSEI)'s data, is in the third position for the largest number of investors in the capital market with a total of 139,187 Single Investor Identification (SID) (Wijayanto, 2019). Meanwhile, 48.626 SIDs of East Java's amount are from Surabaya (Wijayanto, 2019). In addition, Surabaya has the highest percentage of financial literacy among other cities in East Java at 45.9% and the number is expected to continue growing ("Survei Nasional Literasi Dan Inklusi Keuangan 2019," n.d.). The IDX established programs such as Yuk Nabung Saham and Galeri Investasi, which are intended to increase people's awareness of the importance of investing in stocks as well as engage new potential investors (*Bursa Efek Indonesia*, n.d.).

Referring to the Saputro & Lestari (2019), which studied financial literacy and risk perception toward investment decision, stated the allocation of income to invest is crucial because it is done with the expectation of gaining future profit and the accumulation of these investments would support a country's progress. Another study by Dewi & Purbawangsa (2018) stated that financial literacy has a significant impact on investment decisions. A good investment decision needs good financial literacy in order to ensure the investment decision is in accordance with the expectations of the investors. Similarly, a person's risk perception will impact their investment decisions, in which the investment chosen as well as the amount of funds invested will be influenced by their risk perception (Saputro & Lestari, 2019). This statement is supported by Kumar & K.P. (2014) who states that the risk perception of investors has a substantial impact on their investing decisions.

Literature Review

Investment Decision

Investment itself can be defined as a medium-term or long-term resource allocation that is expected to return the investment costs as well as gain a high profit (Virlics, 2013). As defined by Hani et al. (2020), investment is an activity that places a certain amount of funds in chosen assets during a period of time in order to earn an income or increase the investment's value. While decision-making can be defined as a process where an individual reaches a conclusion about the future actions that need to be pursued to achieve certain objectives (Schoemaker & Russo, 2016). Similarly, decision making can also be understood as a cognitive process that results in choosing between several alternatives (Shahsavarani & Abadi, 2015). According to Shindu & Kumar (2014), investment decision is investors' evaluation of where, when, how, and how much money they will allocate in various financial products in order to generate income or value appreciation. They also mention that investors usually evaluate risk and return of an investment decision as the decision making behavior of an investor is affected by their attitude towards risk (Shindu & Kumar, 2014). Moreover, Putri & Rahyuda (2017) mentions that investment decisions are investors' investment incentives that are influenced by the risk and return of a particular investment. Therefore, based on Hani et al. (2020) and Schoemaker & Russo (2016) investment decisions is a process done by a person or an organization to reach a conclusion on where to place a certain amount of their funds during a period of time in order to earn an income or increase in the investment's value. The indicators to measure investment decision are investment security, risk factor component, investment income, investment growth and liquidity (Schoemaker & Russo, 2016).

Financial Literacy

Financial literacy is the degree to which an individual understands significant financial concepts and has the ability and confidence to manage personal finances through appropriate, short-term decision-making and sound, long-term financial planning, while taking into account life events and changing economic conditions (Remund, 2010). It can also be explained as the combination of several skills, resources, and contextual knowledge to process information and choose actions based on the decision's financial risk (Stolper & Walter, 2017). Similarly, Kemendikbud (2017) defines financial literacy as knowledge and skills for applying the understanding of financial concepts and risks, ability for making effective decisions financially for financial well-being, both individually and socially, and for community participation. Nevertheless, the increase of financial literacy will remain important for welfare improvement through better decision-making of the public (Swiecka et al., 2020). Remund (2010) has operationalized financial literacy through several indicators, which are financial knowledge, communication, aptitude, and confidence. The researchers have decided to eliminate financial skill as it is overlapped with the investment decision.

An investment decision occurs due to the want to anticipate rainy days in the future (Oladapo, 2015). Efficient financial resource management is supported by financial literacy (Hamza & Arif, 2019). Supporting this, Chang & Hanna (1992) posited that an individual with a high level of financial literacy will make more profitable investment decisions compared to those who have a lower financial literacy rate. Similarly, an investor with an adequate financial literacy would make more accurate investment decisions than those with a lower financial literacy (Fitrianingsih, 2019). Prior studies observed that investors that lack financial literacy tend to make investment decisions that are not favorable, such as avoiding participation in the stock markets and holding less diversified portfolios (Fedorova et al., 2015). While those with initial financial literacy and who invest in financial literacy have a superior strategy to improved making investment decisions to generate high returns (Jappelli

& Padula, 2013). Likewise, Gilenko & Chernova (2021) found that a better financial literacy will make the investment decisions more accurate. Then the following hypothesis is made:
H1: Financial literacy affect the investment decisions of young adults in Surabaya.

Risk Perception

Risk Perception can be defined as an investor's perception of financial assets' risks depending on their prior experiences and concerns (Shindu & Kumar, 2014). Moreover, according to Saputro & Lestari (2019), risk perception is investors' perception of risks due to uncertainties in their investment decisions making. Meanwhile, risk perception can also be described as a subjective evaluation of a plan of actions and encapsulates the probability of adverse results as well as the awareness of the severity of their respective outcomes of each decision taken (Sjöberg et al., 2004). In addition, Biais & Weber (Biais & Weber, 2009) mentioned that risk perception is the way investors, based on their prior information, understanding, and concerns, perceive the risk of financial assets. Based on the summarized theories from Shindu & Kumar (2014), Sjöberg et al. (2004), and Biais & Weber (2009) risk perception is defined as the investors' personal judgement or evaluation of potential risks on financial products based on their knowledge and experiences. Shindu & Kumar (2014) mentioned several indicators to operationalize risk perception are unpredictability of returns, chance for incurring loss, diversification of portfolios, dependence on professional investment advice, and knowledge about the financial assets. However, knowledge about the financial assets will be excluded as it is more relevant to financial literacy.

Risk perception plays a crucial role in human behavior, particularly in unpredictable situations relevant to decision making (Forlani & Mullins, 2000). Prior research from Shindu & Kumar (2014) found that investors' investment decisions are strongly affected by their risk perception. Supporting this, Wulandari & Iramani (2014) posited that risk perception significantly impact on investment decision making. When investors have a higher level of risk perception, they tend to buy or choose low risk assets due to their fear of potential risks. On the contrary, the lower the level of risk perception of investors, the proportion of investment in low-risk investment will be lower. It is supported by Hariharan et al. (2000) that if investors have a higher risk perception, they are more likely to allocate funds to low-risk assets. In addition, Saputro & Lestari (2019) concluded that risk perception has a significant impact on investment decisions. They found that investors will be more motivated to invest in the investment products when the investors perceived them as less risky and relatively safe. Therefore, the following hypothesis is formed:
H2: Risk perception affect the investment decisions of young adults in Surabaya.

Methodology

Simple random sampling was chosen as the sampling design and the respondents should be people who are between the ages of 17-35 years old, who have prior investment experience and lived in Surabaya for at least the past 6 months. The distribution of the online questionnaire will be done through social media and other communication channels, such as WhatsApp, LINE, Linked In, and Instagram. Moreover, the method of broadcasting messages and posting Instagram Stories will be utilized so that the targeted population will have the same chance to fill the questionnaire. Then, the researchers have to determine the appropriate sample size for the research based on Green (1991), the suggested minimum number of respondents required is:

$$N \geq 50 + 8m \qquad (1)$$

In this formula, N would be the minimum number of subjects, while m would be the predictor of the research. There are a total of two predictors in this research, so the number of samples that need to be collected for this research is 66 respondents (Green, 1991).

The researchers utilized indicators from Schoemaker & Russo (2016) to measure investment decisions, which are investment security, risk factor component, investment income, investment growth, and liquidity as shown in Table 1.

Table 1. Measurements of Investment Decision

Measurements	Explanation
Investment security	The measurement of security of investment indicating a minimal risk of loss
Risk factor component	The predictability of component of risk factors relating to specific investments that changes over time
Investment income	The predictability of a fixed cash income from an investment
Investment growth	The understanding of investment growth by analyzing the increase in value of investment over time
Investment liquidity	The analysis of whether the liquidity of an investment is high or low

The operationalization of financial literacy is in Table 2 adapted from Remund (2010) : operationalized financial literacy through several indicators, which are financial knowledge, communication, financial aptitude, and financial confidence.

Table 2. Measurement of Financial Literacy

Measurements	Explanation
Financial knowledge	Understand the financial products and concepts
Financial communication	Able to communicate financial concepts
Financial aptitude	Aptitude in managing personal financial
Financial confidence	Confidence to plan effectively for future financial needs

The indicators to measure risk perception are taken from Shindu and Kumar (2014), which are the unpredictability of returns, the chance for incurring a loss, diversification of portfolios, and dependence on professional investment advice as shown in Table 3.

Table 3. Measurements of Risk Perception

Measurements	Explanation
Unpredictability of returns	The degree people perceive risky investment to bear unpredictable return
Chance for incurring a loss	The understanding that the higher the investment's yield, the greater chance to incur loss
Diversification of portfolios	The degree of investors' portfolios diversification could affect their investment risks
Dependence of professional investment advice	The need of professional investment advice for deciding the best investment choice

In order to eliminate and minimize the probability of false results in the research, the researchers did the validity and reliability test as suggested by Sekaran and Bougie (2019) for ensuring the accuracy of the instruments used. Pearson Correlation is used to test the validity and Cronbach Alpha is for testing the reliability of the measures. Then BLUE classical assumption test which includes multicollinearity, heteroscedasticity, and normality are applied. Autocorrelation will not be included in this research as it is to determine the residuals' relationship in the previous and current period (Ghozali, 2018). Next, the multiple regression to know the relationship between investment decisions affected by financial literacy and risk perception model is as follows:

$$Y=\alpha+\beta_1 X_1+\beta_2 X_2+e \qquad (2)$$

Which:

Y = Investment Decision
α = Constant
β_k = Slope of the k-th independent variable
X_1 = Financial Literacy
X_2 = Risk Perception
e = Error term

Analysis and Discussion

Result

Online questionnaires were distributed through social media and other communication channels, and 89 respondents participated. The profile of the respondents who participated in this study have profile as follows: 40 out of 89 respondents (45%) were between 22 to 26 years old while 19 out of 89 respondents (21%) were within the 17-21 age range. Then, 17 out of 89 respondents (19%) were between 27 to 31 years old, and 13 out of 89 respondents (15%) were between 32 to 35 years old.

The validity test is conducted by using Pearson Correlation and all items are considered to be valid (p value< 0.05) and reliability test uses Cronbach Alpha and all items are reliable (> 0.7) (Sekaran & Bougie, 2019) as shown in Table 4. The data are all passing the validity and reliability, then researchers will sequentially conduct the BLUE classical assumption test which includes multicollinearity, heteroscedasticity, and normality. Autocorrelation will not be included in this research as it is to determine the residuals' relationship in the previous and current period (Ghozali, 2018).

Table 4. Validity and Reliability Test Results

Variable	Indicators	Pearson Correlation Sig.(2-tailed)	Cronbach Alpha	Number of Items
Financial Literacy Indicators	FL1	<0.001	0.840	5
	FL2	<0.001		
	FL3	<0.001		
	FL4	<0.001		
	FL5	<0.001		
Risk Perception Indicators	RP1	<0.001	0.728	4
	RP2	<0.001		
	RP3	<0.001		
	RP4	<0.001		
Investment Decisions	ID1	<0.001	0.752	5
	ID2	<0.001		
	ID3	<0.001		
	ID4	<0.001		
	ID5	<0.001		

To make sure that the independent variables are not correlating and affecting each other, a multicollinearity test is conducted by using the Variance Inflation Factor (VIF) value that must be lower than 10 (Ghozali, 2018). The data below shows that all variables have the VIF is < 10 (Table 5). Therefore, it can be concluded that all variables succeed in passing the multi-collinearity test.

Table 5. Multicollinearity, Heteroscedasticity and Normality Test Result

Variable	VIF	Glejser Sig. Value	Kolmogorov Smirnov Sig.Value (2-tailed)
Financial Literacy	1.446	0.761	0.200
Risk Perception	1.446	0.288	

The second assumption tested would be heteroscedasticity which analyses the variance of residuals of independent variables. A good regression model has a consistent variance for all values of independent variables and this assumption was tested using the Glejser test. Regression between independent values and the regression residuals' absolute value should give a significance value ≥ 0.05 to pass the test. In Table 5, the Glejser Test results show that all variables in regressions have significant values of over 0.05, indicating that the residuals' variance is consistent or homoscedastic. One-Sample Kolmogorov Smirnov Test is used to determine whether the data taken are typically distributed. If the Sig. value (2-tailed) value is ≥ 0.05, the residuals are normally distributed. Table 5 shows that the Sig. (2-tailed) value is 0.2, which is ≥ 0.05, thus passing the requirements and considered as normally distributed.

Table 6. Multiple Regression Result

Variables	Unstandardized B	t-value	Significance Value
Financial Literacy	0.457	4.674	<0.001
Risk Perception	0.232	2.701	0.008
Constant	1.080	3.220	0.002
F-Test		<0.001	
Adjusted R-Square		0.407	

To find out the impact of independent variables on the dependent variable, F-test was conducted. The significance value falls below 0.05 (Table 6) which indicates that the H0 is rejected. Thus, at least one independent variable significantly affects the dependent variable. Then t-test is then conducted to see whether each of the independent variables significantly affects the dependent variable. As shown in Table 6, the significant values of each independent variable are under 0.05, which means that H0 is rejected. This indicates that financial literacy and risk perception significantly affects investment decisions. The adjusted R^2 of the model is 0.407 (Table 6) which means that the independent variables (financial literacy and risk perception) can explain 40.7% of the variance in the dependent variable (investment decision).

Discussion

Financial literacy has a significant value lower than 0.05. which indicates that both independent variables reject the H0. In Figure 3., the unstandardized beta for financial literacy is 0.457. Therefore, financial literacy can be deduced to have a significant positive impact on investment decision for young adults in Surabaya. Young adults in Surabaya with a high level of financial literacy will be able to achieve more profitable investment decisions compared to individuals with lower financial literacy. Furthermore, the findings of this research is aligned with Fedorova et al. (2015) that stated lacking financial literacy tends to cause unfavourable investment decisions. Similarly, Gilenko & Chernova (2021) stated that a good financial literacy is required so that the investment decisions are accurate. The mean of each item for financial literacy are 3.9888 and 3.9101, the items for the financial knowledge indicator have the highest mean. The previously mentioned statement implies that the young adults of Surabaya understand financial concepts and products well. Surabaya has the highest percentage of financial literacy at 45.9% among the other cities in East Java ("Survei Nasional Literasi Dan Inklusi Keuangan 2019," n.d.). Correspondingly, Remund (2010) states that financially literate people would have knowledge of key financial concepts. Moreover, a high financial literacy indicates understanding of financial products along with how to utilize them (*Indonesian National Strategy for Financial Literacy*, 2013).

Meanwhile, risk perception, with a significance value of 0.008, also has a significant impact on investment decision. That means a risk perception of young adults in Surabaya which is personal judgement or evaluation of toward potential risks on financial products based on their knowledge has impacts on investment decision. This is aligned with the prior research by Forlani & Mullins (2000), risk perception has an important role in human behavior, especially in unpredictable circumstances that require decision making. Moreover, Wulandari & Iramani (2014) found that risk perception significantly impacts investment decision making. Research conducted by Dewi et al. (2018) also confirmed that perceptions of risk have a significant influence on investment decision. Furthermore, in Table 6 the unstandardized beta for risk perception is 0.232. It can be concluded that risk perception has a significant positive impact on investment decision. A prior study from Saputro & Lestari (2019) also highlights that risk perception has a significant positive impact on investment decisions. If a young adult in Surabaya has a lower level of risk perception, the proportion of investment in low-risk investment will be lower. The second item of risk perception has a mean of 4.1124, which indicates that Surabayan young adults are aware that the higher the yield, the higher the risk of incurring loss. The fourth item of investment decision has a mean of 3.7978 which is the highest, that means that Surabayan young adults would invest when the increase in value of the investment can be expected. In relation to that, according to Lo Kheng Hong, a successful investor known as Indonesia's Warren Buffet, investing in a product that is predicted to have an increase and growth in its value is more favorable by investors (Triyono, 2021). In the midst of the COVID-19 pandemic, the enthusiasm of Surabaya citizens for gold is increasing (Haryono, 2021). They are increasingly attracted to investing in gold due to their trust in the value of gold will increase (Dhimas, 2021). Aside from investing in gold, property investment is also forecasted to increase in 2021. According to Stefanus Budihardja, who is the Director of CitiNine Group, there has been an increase in property investment done by young investors ("Kejar Passive Income, Kalangan Muda Tertarik Investasi Properti," 2020).

Conclusions and Recommendations

The result of this research provides meaningful information and knowledge for investors and young adults in Surabaya about the relation of financial literacy and risk perception toward investment decisions, and also learn the factors that have impacts on it. This research found that financial literacy and risk perception influence young adults' investment decisions in Surabaya simultaneously and individually. It means that an investor or individual with a high level of financial literacy will be able to get more profitable investment decisions compared to those with lower financial literacy. Accordingly, investors and young adults in Surabaya should enhance their financial literacy in order to be able to choose the appropriate financial product since financial literacy enables them to manage their finances and making investment decision wisely. The research could be utilized as a reference or supporting material for future research about factors that impact investment decisions are suggested to include financial literacy and risk perception as their independent variables and to adds new insight, knowledge, and information related to individuals' financial literacy, risk perception, and investment decision making, especially about young adults in Surabaya. Future researchers could utilize this research's theoretical framework for conducting research to a different city. The results maybe different for a different city since each city has its own characteristics. Thus, the findings of this research could not be directly generalized to young adults in different cities.

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