The Effect of Financial Literacy on Investment Decision with Financial Behavior as A Moderation Variable in Students in Denpasar City

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ARTICLE INFO		ABSTRACT
Keyword: Investment Decision; Financial Literacy; Financial Behavior;		This study attempts to examine the influence that financial literacy has on investment decisions and how that effect can be tempered by the financial behavior of college students in Denpasar City. Specifically, this study focused on college students in Denpasar City. This study involved quantitative methods. There were 130 pupils from the Denpasar City region that made up the sample population. Primary data were used in the analysis, which was conducted using the PLS-based structural equation modeling approach. The method of collecting data makes use of a questionnaire that is scored on a Likert scale and is submitted using a Google Form. The data are collected using a purposive sampling approach. According to the findings of the study, having a strong understanding of personal finance has a large and favorable impact on investment choices.

1. Introduction

The current global economic conditions have affected the Indonesian economy. Increasing economic growth is one of the strategies implemented as part of efforts to maintain economic stability [1]. Investment operations are one of the activities that can help economic growth in the financial sector [2]. The main target of investment is to achieve profit or profit in the future, and the investment can be made directly or indirectly.[3]. Economic growth in a country will actually be accelerated by the increasing number of investment activities, both in the national or domestic sphere as well as in the international sphere or abroad.[4]. Investment is defined as deferring current consumption to be used in efficient production for a certain period of time [5].

Good investment activities start from making good investment decisions as well. The process of arriving at a conclusion or reaching a decision about some topic or issue, choosing one investment option from among two or more possible investments, or participating in the transformation of inputs into outputs is known as investment decision making.[6]. Investors make decisions based on probabilistic alternatives involving risk when the probable outcome of the investment decision is known [7]. If an investor is able to make the right investment decisions, then the investment decision results obtained will also be good [8]. According to information provided by the Indonesian Central Securities Depository (KSEI), the number of individuals who have invested in the stock market of the Indonesian economy has exceeded 4 million. According to the figures provided by KSEI at the end of the first semester of 2022, the number of Single Investor Identification (SID) has reached 4,002,289, with 99.79% of them being local individual investors (KSEI, 2022). There are around 60.45% of investors who are private employees or civil servants, teachers or students, and the total asset value is around IDR 358.53 trillion [9]. The increasing number of investors in the capital market appears to be dominated by young investors under 30 or 40 years of age. This age is in the age of Z and millennial generations who have a birth year span around 1996 – 2012 or 1982 to 1996[10].

The existence of a large number of participants who exhibit a variety of feelings and patterns of behavior when making investment decisions. This is a key factor contributing to the complexity of the investment decision-making process [7]. Education about financial literacy is one of the attitudes and behavior patterns of an investor in choosing to invest. As many as 68% of respondents were dissatisfied with their economic conditions, such as declining income levels which caused financial problems [11]. Economic problems, on the other hand, are not only caused by low income levels, but also by low levels of financial literacy [2].

People in today's culture need to have a basic understanding of personal finance in order to make it well. This basic knowledge requires recognition and understanding of some of the complex ideas related to spending, saving and investing [12]. To make an investment plan, people need good financial knowledge and literacy so that every decision they make leads to a clear and correct direction [13]. This statement is also supported by research by [14] who found that an increase in financial literacy has a sizeable beneficial effect on investment decision making. However, research by [15] shows data that does not show a substantial relationship between financial literacy and investment decisions.

A person's habitual and behavioral patterns in relation to his own money management are referred to as their "financial behavior."[16][17]. This statement is supported by research by [18] who found that class of 2016 students at STIEM BONGAYA were able to demonstrate financial behavior that was able to moderate the extent to which the impact increased the relationship between financial literacy and investment decisions. Other research showed different treatment of the effect of financial behavior on financial literacy and investment decisions. Research by [19] shows that financial behavior fully mediates the effect of financial literacy on investment decisions.

A number of factors, such as one's level of financial literacy and behavior in relation to money, can have an impact on one's investment choices, as shown by the findings of various studies conducted in the past. This is shown to be a source of motivation for conducting a study with the aim of determining the relationship between a person's level of financial literacy and their choice of investment, with the moderating influence of their financial behavior.

2. Research Methods

This research was conducted in This research was conducted in the Denpasar City area. This location was chosen because the distribution of the object of this research, namely students as generation Z in Denpasar City is very rapid because this area is the capital of Bali which has the largest number of students compared to other regions.[20]. The population used for this study consisted of students from the Denpasar City area, to be precise from the West Denpasar, South Denpasar, East Denpasar and North Denpasar sub-districts. Purposive sampling was used to collect data for this study, and the sample group consisted of students who actively participated in the capital market in the Denpasar City area who were born between 1981 and 1996 (members of the Millennial Generation) and students who were born between 1997 and 2012. (members of Generation Z) (Gen Z). This study used primary data in the form of respondents' responses to a questionnaire containing a Likert scale and sent to the participants. Outer model test, inner model test, and hypothesis testing were carried out for this study using the PLS SEM program.

3. Results and Discussion

Characteristics of Respondents

Respondents who participated in this study were students in the Denpasar City area who had been involved in the world of investment, particularly investing in stocks in the capital market, where men were dominant compared to women. Then, the majority of respondents who participated in this study were aged 15-25 years by 70%. Meanwhile, respondents aged 32-41 years showed the least amount, namely 8%. This shows that students who have invested in the capital market are dominated by generation Z as the productive age group compared to the millennial generation which is quite

low. The number of respondents in the North Denpasar area shows the smallest number among other regions, namely 15%. Then, the number of respondents in the East and West Denpasar areas is at the median value of 18% and 28%. Meanwhile, the number of respondents in the South Denpasar area showed the highest number, namely 38%. So, active students in the Denpasar City area are dominated by students in the South Denpasar area, namely as many as 50 people. Meanwhile, the majority of active students in the Denpasar City area have invested in the capital market for 6 months – 1 year.

Test Outer Models
Validity Test

Table 1. Outer Loading Factor of Indicator

	Investation decision	LK*PK	Financial Literacy	Financial Behavior
KI1	0.854			
KI2	0.757			
KI3	0.871			
LK1			0.865	
LK2			0.843	
LK3			0.841	
LK4			0.708	
Financial Literacy * Financial Behavior		1,237		
PK1				0.820
PK2				0.907
PK3				0.771
PK4				0.734
PK5				0.781
PK6				0.815

Source: Primary data processed (2022)

The results of the convergent validity test using the outer loading output are shown in Table 1, where it can be seen that each research indicator meets the criteria with a value greater than 0.70. The test score of this research shows that there is a moderating effect of the financial behavior variable on the relationship between financial literacy and financial action of 1.237. So, the moderating effect of financial actions on the relationship between financial literacy and investment decisions is more than 0.70. So that the research data passed the convergent validity test and can be used in subsequent procedures.

Table 2. Results of Average Variance Extracted (AVE)

	Average Variance Extracted (AVE)
Investation decision	0.686
LK*PK	1,000
Financial Literacy	0.667
Financial Behavior	0.650

Source: Primary data processed (2022)

Table 2 displays the results of the convergent validity test using the Average Variance Extracted (AVE) output. The table shows that the Average Variance Extracted (AVE) value for each research construct which includes financial literacy, financial behavior, and investment decisions, as well as the interaction between financial literacy and financial behavior, has obtained a value greater than the specified criteria, which is equal to 0 ,5. Thus, it is possible to assert that the variables used in this study are valid.

Table 3. Cross Loading Results

	Investation decision	LK*PK	Financial Literacy	Financial Behavior
KI1	0.854	0.043	0.449	0.448
KI2	0.757	0.111	0.333	0.417
KI3	0.871	0.193	0.553	0.417
LK1	0.549	-0.189	0.865	0.491
LK2	0.391	-0.146	0.843	0.486
LK3	0.453	-0.131	0.841	0.483
LK4	0.357	-0.187	0.708	0.753
Financial Literacy * Financial Behavior	0.143	1,000	-0.200	-0.094
PK1	0.358	-0.204	0.655	0.820
PK2	0.370	-0.154	0.599	0.907
PK3	0.374	-0.043	0.535	0.771
PK4	0.581	-0.020	0.487	0.734
PK5	0.308	-0.127	0.518	0.781
PK6	0.351	0.057	0.379	0.815

Source: Primary data processed (2022)

Table 4. Fornell-Larcker Criterion results

	Investation decision	LK*PK	Financial Literacy	Financial Behavior
Investation decision	0.828			
LK*PK	0.143	1,000		
Financial Literacy	0.547	-0.200	0.817	
Financial Behavior	0.513	-0.094	0.658	0.806

Source: Primary data processed (2022)

   The findings of the discriminant validity test of this study were determined in two stages: analyzing the output cross-load, as shown in Table 3, and assessing the output of the Fornell-Lracker Criteria, as shown in Table 4. The correlation value of the indicator to the construct is greater than the correlation value of the indicator to other constructs, as shown in Table 3. Likewise, the moderating relationship between financial literacy and financial behavior has a stronger correlation coefficient. Therefore, it can be said that the cross loading value in table 3 has strong discriminant validity. In addition, Table 4 shows that the discriminant validity test based on the Fornell-Larcker criteria yielded positive findings, because the square root of AVE is greater than the correlation between latent variables. As well as, the moderate financial behavior association has a value greater than 1,000. Thus, it can be concluded that the research data met the criteria of very good discriminant validity.

Reliability Test

Table 5. Reliability Test Results

	Cronbach's Alpha	Composite Reliability
Investation decision	0.772	0867
LK*PK	1,000	1,000
Financial Literacy	0.833	0.888
Financial Behavior	0.894	0917

Source: Primary data processed (2022)

   The investigative findings of Cronbach's Alpha and Composite Addiction are presented in Table 5. These findings indicate that each research construct, which includes financial literacy, financial behavior, and investment decisions, meets the reliability standard. Likewise, by showing moderation in one's financial activities by a thousand. This can be seen from the value of Cronbach's Alpha and Composite Reliability in each construct which is greater than 0.7. So it can be concluded that the research data can be trusted.

Inner Model Test
R-square (Coefficient of Determination)

Table 6. R-Square Test Results (R2)

	R Square	R Square Adjusted
Investation decision	0.402	0.388

Source: Primary data processed (2022)

The investment choice value is calculated at 0.388 based on the R-square test results presented in Table 6. These findings indicate that independent factors including financial literacy and financial behavior can explain 38.8% of the variance seen in the choice variable. While the remaining 61.2% can be accounted for by other factors that are not taken into account in the research model.

Hypothesis Testing

Table 7. Hypothesis Test Results

	Original Sample (O)	Sample Means (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
LK*PK -> Investment Decision	0.204	0.176	0.096	2.127	**0.034**
Financial Literacy -> Investment Decision	0.431	0.434	0.135	3,183	**0.002**
Behavioral Finance -> Investment Decision	0.254	0.264	0.112	2,269	**0.024**

Source: Primary data processed (2022)

The results of the hypothesis testing analysis in Table 7 explain the influence relationship between the independent variables and the dependent variable of this study, namely as follows:

1) The Effect of Financial Literacy on Investment Decisions

The first hypothesis to be tested in this investigation proposes that increasing one's level of financial literacy will result in better investment choices. In Table 7 it can be explained why the regression coefficient value reached 0.431. The t-statistic value (t-count) obtained is 3.183, and the p-value obtained is 0.002. Based on these findings, the initial hypothesis presented in this study can be adopted. This makes sense considering that the t-statistic value obtained is greater than the t-table value, namely 1.97, and the resulting p-value is lower than the 0.05 significance level.

2) Effect of Financial Literacy on Investment Decisions with Moderation of Financial Behavior.

The second hypothesis to be tested in this investigation is that increased financial literacy will have a beneficial impact on investment choices, with financial behavior as a moderator. Table 7 shows that the regression coefficient value obtained is 0.204, as can be observed in this table. While the t-statistic and p-value found were 2.127 and 0.034 respectively. Based on these findings, the second hypothesis tested in this study can be accepted. This is easy to understand considering that the t-statistics and p-values obtained meet the requirements, which are above the t-table significance level of 1.97 and also below the significance threshold = 0.05 which indicates that the research produces good findings.

Discussion

The Effect of Financial Literacy on Investment Decisions

The test results show that the initial hypothesis in this study is correct. The tcount value for financial literacy is 3.183, higher than the ttable value of 1.97. The significance value of 0.002 is smaller than Sig. 0.05. As a result, H0 is rejected, while H1 can be accepted. As a result, it is possible to conclude that financial literacy or knowledge has a beneficial and sizeable impact on investment decisions. The findings of this study are consistent with a recent study by Munawar et al. (2020), who found that financial literacy has a beneficial and substantial influence on investment decision making among MM students at the Faculty of Economics, Unand Padang. The research findings of Meirisa and Andreansyah (2022) and Putri et al (2021) were then compared with this study. The findings show that financial literacy has an impact on investment decisions. Based on the findings of previous studies, it has been shown that financial literacy has a strong beneficial effect on investment decisions for students in the Denpasar City area.

Based on the findings of previous research and previous research, it can be concluded that financial or financial literacy has an impact on investment decisions. Then in terms of financial literacy and investment decisions, respondents' responses indicate that students, especially in the Denpasar City area, are more likely to decide to invest if knowledge about investment is fulfilled, especially in how students manage finances, as evidenced by monthly financial fees. Then, after considering investment information for all forms of investment, students will establish themselves to invest by determining the goal rate of return.

The Effect of Financial Literacy on Investment Decisions with Moderation of Financial Behavior

The findings of testing the second hypothesis in this study are acceptable. The t-count value of 2.127 for the relationship between financial literacy and financial behavior as a moderating variable on investment decisions is greater than the t-table value of 1.97. The significance value of 0.034 is smaller than Sig. 0.05. Therefore, H0 is rejected and H2 is accepted. The test scores obtained in this study indicate that financial behavior characteristics moderate the relationship between financial literacy variables and investment decisions. The R-square test results show that the investment decision value is 0.388%. This means that 38.8% of the variance in the investment choice variable can be explained by the financial literacy and financial behavior variables. The remaining 61.2% can be explained by factors outside the scope of the study. The conclusion that can be drawn from this description is that financial literacy or knowledge influences investment decisions positively through supported moderate financial behavior. This suggests that financial behavior can reduce the strong relationship between financial literacy and investment decisions.

The findings of this study are in line with the findings of Audini et al. (2020), who found that financial behavior can modify the extent to which the given effect increases the relationship between financial literacy and student investment decisions. According to the findings of Panjaitan & Listiadi (2021) and A'Yuni (2020), financial behavior moderates the impact of financial or financial literacy on investment decisions. Based on the results of this study and previous research, it can be stated that financial literacy influences investment decisions, with financial behavior as a moderator. Then the respondents' answers about their financial behavior revealed that students, especially in the Denpasar City area, were more likely to make investment decisions by considering the rate of return and the amount of risk in the short and long term. Thus, someone who decides to invest must choose the best investment option based on good financial knowledge and financial behavior. Thus, a solid understanding of financial behavior can help a person understand his ideas related to money and achieve financial literacy. Thus, someone who wants to be involved in investment activities must manage their resources carefully and have a basic understanding of finance through financial literacy. a person who decides to invest should choose the best investment option based on good financial knowledge and financial conduct. Thus, a solid understanding of financial behavior can help a person understand his ideas related to money and achieve financial literacy. Thus, someone who wants to be involved in investment activities must manage their resources carefully

and have a basic understanding of finance through financial literacy. a person who decides to invest should choose the best investment option based on good financial knowledge and financial conduct. Thus, a solid understanding of financial behavior can help a person understand his ideas related to money and achieve financial literacy. Thus, someone who wants to be involved in investment activities must manage their resources carefully and have a basic understanding of finance through financial literacy.

4. Conclusion

The phenomena that have been discussed at the beginning of the introduction form the basis of the research objective, which is to evaluate the effect of financial literacy on investment decisions and how this influence is modified by students' financial behavior. Findings from tests conducted in this research project have shown that the level of financial literacy of individuals has a favorable and significant impact on the decisions they make about their investments. This indicates that an increase in individual financial or financial literacy will be accompanied by a significant increase in the number of investment decisions. The ability to understand and manage finances responsibly has been shown to have a large and beneficial impact on investment choices.

There are several ideas for additional studies in order to broaden the scope of the population and research samples in order to provide a more comprehensive understanding of the elements that influence investment decisions. Then, future research should be able to test models that combine more factors, so that research findings can provide a clearer picture. Apart from using qualitative methods such as interviews to create deeper knowledge about the elements that might influence investment decisions, we can also use quantitative methods. Students need to be encouraged to play a more active role in expanding financial knowledge and keeping abreast of developments in the national economy.

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