THE MODERATION ROLE OF FINANCIAL LITERACY TO INFLUENCE FINANCIAL BEHAVIOR ON INSURANCE INVESTMENT DECISIONS

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ABSTRACT
Today financial literacy can also help improve a person's well-being in financial behavior. Purpose of this study is to identify the moderation role of financial literacy influencing financial behavior on insurance investment. The data used are primary data and as a measure he collects directly by distributing questionnaires containing three Likert parts. The questionnaire includes financial literacy, financial behavior, and decisions on insurance investment. This research focuses on unit-linked insurance customers in East Java, Indonesia. The samples were obtained from individuals living in East Java with unit-linked insurance. The total number of respondents is 102 respondents aged from 25 to 40 years old. Most of the respondents are female with 52 people or 53.6%, while male 46.4%. Also, most of the respondents who work as employees or entrepreneurs have a college degree (45 people or 46.4%). The majority of respondents had unit-linked funds placement on a fixed income (39 people or 58.2%). Data analysis technique consists of testing the validity and reliability, simple linear regression, hypothesis testing, and moderated regression analysis. The findings show that financial behavior positively and significantly affects insurance investment decisions, moderated by financial literacy.

KEY WORDS
Insurance, financial behavior, financial literacy, investment decision, unit-linked, individual.

Financial literacy is a set of activities designed to improve an individual's financial knowledge, skills and confidence (Otoritas Jasa Keuangan, 2013). Financial literacy also helps improve an individual's well-being in financial behavior. Individual financial literacy therefore influences individual management behavior. The relationship between an individual's financial literacy and their possession has significant impact on their financial behavior in decision-making. Good financial literacy makes it easier for individuals to manage their finances and make financial decisions.

Financial behavior is an understanding made by individuals in making financial decisions and financial discipline (Byrne & Utkus, 2013). Individuals in being selective in managing finances will take appropriate financial decisions. According to Indonesian Institute of Sciences (LIPI) survey results, the Indonesian population ranks third among a total of 106 samples, and the demographic predicate is more consuming indicates that this consumeristic financial behavior tends to forget about future financial needs. The consequence of this unconscious, consumptive financial behavior leads to future financial difficulties. Residents of other countries such as Singapore and Malaysia are aware of future financial needs as insurance purchases in these two countries are much higher than in Indonesia. This indicates that the financial behavior of both countries shows a higher-level awareness of future financial needs compared to the perception of the Indonesian public.

According to data from the Indonesian Life Insurance Association (AAJI), gross premium income of Rp 127.7 trillion during 2021 (Waty, 2022). The amount of life insurance premium income from Unit Link accounts for a portion of 62.9% of the total premiums (AAJI,

2022). Nevertheless, the penetration rate of the Indonesian insurance industry is still very low, known to be worth only 3% until 2019, suggesting that the financial behavior of the Indonesian people is still very low (Otoritas Jasa Keuangan, 2019).

The variety of types of financial products is currently followed by the growth of more and more insurance companies. The large number of insurance companies that currently exist in Indonesia have various types of insurance offered such as health, life, education, old age, vehicle insurance and so on. The number of policyholders in Indonesia is currently still very low compared to other countries (OECD, 2015). The low level of insurance holders in Indonesia is revealed in the research of Brahmana et al., (2018) which is motivated by public ignorance of the benefits of insurance. This is in accordance with data from the Organization for Economic Cooperation Development (OECD) which shows that the purchase of insurance in Indonesia is only 1.57% of the country's per capita income. This value is very low compared to Singapore's 8.32% of income per capita and Malaysia's 4.78%. The value of this insurance purchase has a significant difference, this indicates that the financial behavior of the Indonesian people is different from the financial behavior of other countries.

The various types of financial products offered by financial institutions today require individuals to have the right financial investment decisions. Therefore, financial literacy is one aspect that has an influence on financial management and individual decision making. Based on the current conditions, the researcher conducted a pre-survey to support the existing phenomena. The individual criteria used in the pre-survey of this research are individuals who already have unit-linked insurance. The results of the pre-survey found that the phenomenon of respondents having investment decisions on unit-linked insurance were quite agreeable in making unit-linked investments, but inversely proportional to the results of the phenomenon of financial behavior variables where some respondents chose to be neutral in planning and budgeting for their financial needs. In addition, researchers provide opportunities for respondents related to the reasons for making these investment decisions, from the pre-survey results it was found that respondents did not read insurance contracts as a whole, respondents only obtained information from insurance agents, respondents were tempted by the rate of return and so on. Therefore, in this case financial literacy can be one of the supporters of individuals in good financial behavior.

On the other side, the literature survey revealed that although there is little empirical research on the topic, theoretical research on insurance continues to grow. The impact of the lack of financial literacy, especially in the insurance sector, has also been studied by previous researchers. However, there are still differences in the results of research regarding financial literacy and financial behavior on insurance investment decisions.

HYPOTHESIS DEVELOPMENT

Financial behavior is the behavior involved an individual, including traits, preferences, emotions, etc., that are closely related to humans as intellectual beings in interacting and making decisions to act (Fitriarianti, 2018). In other words, financial behavior is the process that enables individuals to effectively manage and allocate their financial resources through budgeting, saving money, controlling expenses, investing, etc., (Suryanto, 2017). Özkoçak (2021) found that financial behavioral overreaction, an emotion that occurs among investors, positively influences investment decisions. This corresponds with the concept of insurance investment decisions. Behavioral finance in psychological theory has the function to influence investor behavior. Individuals in dealing with financial problems must have been in a position of how much money was received and what portion of the expenditure was needed. The many consequences of financial problems related to expenditures are greater than revenues, requiring individuals to behave selectively. Individuals who have good financial behavior tend to be wiser in managing finances, including investing.

Several studies show that financial behavior has a positive impact on investment decisions. According to Tandelillin (2010), an investment decisions is a decision to allocate a portion of the funds associated with that entity in relation to the intended investment allocation. Investment is a commitment made for a more prosperous future for the funds that

have been invested. According to Mai et al (2020), they use their financial behavior to make investment decisions to join insurers because they trust that the decision to invest in insurance will facilitate future financial management.

H_1: The relationship between financial behavior and insurance investment decisions is positive and significant.

According to Chen (1998), financial literacy is an individual's ability to manage finances so that life in the future will be more prosperous. Manurung & Manurung, (2009:24) states that financial literacy is a set of skills and individual knowledge in making an effective financial decision on the financial resources they have. The many consequences of financial problems related to expenditures are greater than revenues, requiring individuals to behave selectively. Individuals who have good financial behavior tend to be wiser in managing finances, including investing. The same thing was expressed by Budhiraja et al (2018) that behavioral financial theory is very important for investors, as behavior is a key in investment decision making.

H_2: Financial behavior has a positive effect on insurance investment decisions moderated by financial literacy.
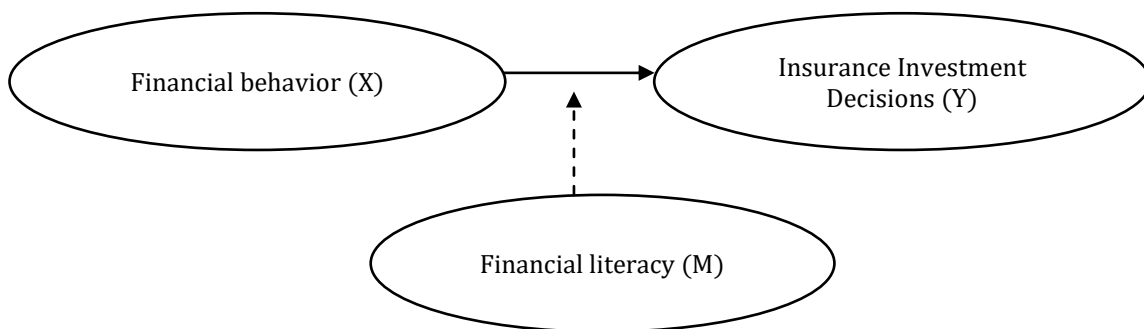

Figure 1 – Research Framework

METHODS OF RESEARCH

In this study, quantitative studies are categorized by survey approach. The data used are primary data and as a measure collects directly by distributing questionnaires containing three Likert parts. The questionnaire includes the role of financial literacy, financial behavior, and decision-making roles on insurance investment. This research focuses on unit-linked insurance customers in East Java, Indonesia. The samples were obtained from individuals living in East Java with unit-linked insurance. Therefore, targeted sampling was used. The sample size for this study was determined using the formula of Lemeshow et al. (1997) because the exact number of customer for unit-linked insurance is unknown.

$$n = \frac{Z^2 P (1-P)}{d^2} = 96{,}04$$

Where: n = total number of samples; z = z-value at 95% confidence level = 1,96; p = proportion of cases studied in the population, use the largest p 50%, if p is unknown = 0,5; d = sampling error 10% = 0,1.

Therefore, 96 respondents were the bare minimum number of samples needed for this research.

Data analysis techniques incluede grouping of data based on variables and respondents types, aggregating data based on all respondents variables, presenting the data of each variables examined, answering formulation problems, and perform calculations to the tests the hypotheses put forward by Sekaran & Bougie (2017). In this quantitative research study, first test the validity of each propositional element and test the reliability on each variable using the IBM SPSS Version 26 application.

Table 1 – Operational Definitions and Measures of Variables

Research Variable	Operational Definitions	Measures
Financial behavior (X)	Financial behavior is behavior contained within an individual includes traits, preferences, emotions, etc. It is closely related to humans as intelligent beings as they interact and make decisions to act.	Based on Herdjiono & Damanik (2016), there are six measures to determine financial behavior, as follows: • Planning; • Budgeting; • Checking; • Managing; • Controlling; • Searching and storing personal financial funds to meet the needs of life.
Insurance Investment Decisions (Y)	An investment decision is a decision made to allocate a portion of the funds associated with that unit link to its intended investment allocation.	Based on Ferdinand (2002), there are four measures to determine insurance investment decisions, as follows: • Transactional interest; • Referential interest; • Preferential interest; • Explorative interest.
Financial Literacy (M)	Financial literacy is an individual's ability to manage finances in a way that will enrich their future lives.	Based on Chen (1998), there are four measures to determine insurance investment decisions, as follows: • Knowledge of personal finance; • Savings and loans; • Insurance; • Investment.

To see if one independent variable has a linear connection with the dependent variable, this study used a simple linear regression method. Based on whether the values of the independent variable are increasing or decreasing, this analysis indicates whether there is a positive or negative association between the independent and dependent variables. It will also predicts the value of the dependent variable. Operational definitions and metrics for the variables are shown in Table 1.

Hypothesis testing is performed by testing the coefficient of determination to determine the magnitude of the impact of financial behavior on insurance investment decisions, with financial literacy as a moderator variable. Therefore, moderated regression analysis (MRA) was also used in this study. According to Sekaran & Bougie (2017), this is a special application of multiple linear regression where the regression equation contains an interaction component (a multiplication of two or more independent variables), where the moderator variables are independent and dependent variables. In this study, a relaxed regression analysis is performed to determine whether the variable financial literacy can improve or reduce the association between financial behavior and insurance investment decisions.

RESULTS AND DISCUSSION

The total number of respondents is 102 respondents between the ages of 25 and 40 years old. Most of the respondents are female with 52 people or 53.6%, while male 50 people or 46.4%. Additionally, most of respondents have a college degree (45 people or 46.4%) and work as employees or entrepreneurs. A majority of respondents have unit-linked funds in fixed income (39 people or 58.2%). The rest is placing unit-linked funds in stocks, mixes, and money markets.

Comparing the r-count and r-table give us validity test of whether the survey is valid. The test uses a significance level (α) = 5%. A statement element is considered valid if r-count > r-table (0.361). The r-count was determined from the number of questionnaires (n=30) in the pre-survey period. Therefore, the r-table of this number is 0.361. Similar to the reliability test, a variable is said to be reliable if α ≥ 0.60.

The results of regression testing I with Insurance Investment Decision (Y) as the dependent variable and Financial Behavior (X) as the independent variable are presented table 3.

Table 2 – Validity and Reliability Test Result

Variables	Indicators	Validity test		Reliability test	
		Pearson (r)	Result	Cronbach's α	Result
Financial Behavior	X_1	0.694	Valid	0.836	Reliable
	X_2	0.405			
	X_3	0.677			
	X_4	0.693			
	X_5	0.760			
	X_6	0.814			
	X_7	0.365			
	X_8	0.751			
	X_9	0.661			
	X_10	0.657			
Financial Literacy	M_1	0.960	Valid	0.934	Reliable
	M_2	0.960			
	M_3	0.621			
	M_4	0.815			
	M_5	0.520			
	M_6	0.960			
	M_7	0.815			
	M_8	0.960			
	M_9	0.815			
	M_10	0.960			
	M_11	0.815			
	M_12	0.960			
	M_13	0.960			
	M_14	0.579			
	M_15	0.815			
	M_16	0.520			
	M_17	0.367			
	M_18	0.815			
	M_19	0.960			
	M_20	0.960			
Insurance Investment Decisions	Y_1	0.826	Valid	0.805	Reliable
	Y_2	0.906			
	Y_3	0.855			
	Y_4	0.806			

Source: Processed by the researchers, 2022.

Table 3 – Simple Linear Regression Test Result

Model	Unstd. Coefficients		Std. Coefficients	t	Sig
	B	Std. Error	Beta		
(Const)	8.496	1.302		6.525	0.000
FINANCIAL BEHAVIOR	0.142	0.034	0.379	4.115	0.000

Dependent Variable: Insurance Investment Decision.
Source: Processed by the researchers, 2022.

Based on the data analysis summarized in the above Table 3, the simple linear regression equation in this study is as follows:

$$Y = 8.496 + 0.142 \, X \qquad (1)$$

The regression equation in above meaning that if the financial behavior (X) = 0 then the insurance investment decision is 8.496. The X regression coefficient for the financial behavior variable is positive 0.142 meaning that the influence of the financial behavior variable is in the same direction as the increase in insurance investment decision. This shows that the financial behavior variable has a positive influence in increasing insurance investment decisions.

The t-test was conducted to determine the significant effect of each independent variable on the dependent variable. In Table 4 below, the calculated t count for financial behavior variable (4.115) is greater than the t table value (1.98). Thus, financial behavior partially has a positive and significant effect on insurance investment decisions.

Table 4 – t-Test Result

Model	Unstd. Coefficients		Std. Coefficients	t	Sig.
	B	Std. Error	Beta		
(Const)	8.496	1.302		6.525	0.000
FINANCIAL BEHAVIOR	0.142	0.034	0.379	4.115	0.000

Dependent Var: Insurance Investment Decision.
Source: Processed by the researchers, 2022.

Table 5 – f-Test Result

Model	Sum of Squares	df	Mean-Square	F	Sig.
Reg	106.969	1	106.969	16.935	0.000[a]
Res	637.963	101	6.316		
Total	744.932	102			

a. Predictors: (Const), Financial Behavior.
b. Dependent Variable: Insurance Investment Decisions.
Source: Processed by the researchers, 2022.

In the above Table 5 shows f count (16.935) is more than f table (3.93) at 0.05 probability with a numerator degree of 1 and a denominator degree of 103, and a significance of 0.000 or less than 0.05 means that the financial behavior variable together has a positive and significant effect on the insurance investment decision variable. This also shows that simultaneously the financial behavior can increase the insurance investment decision positively.

Table 6 – Coefficient of Determination Test Result

Model	R	R-Square	Adj. R Square	Std. Error of the Estimate
1	0.379[a]	0.144	0.135	2.513

a. Predictors: (Const), Financial Behavior.
Source: Processed by the researchers, 2022.

According to Table 6 in above, the adjusted R Square value is 0.144, which indicates that the financial behavior can only account for 14.4 % of the insurance investment decision's explanations, with the remaining 85.6 % being provided by other independent variables that were not considered.

Table 7 – Moderated Regression Analysis Test Result

Model	Unstd. Coefficients		Std Coefficients	t	Sig.
	B	Std. Error	Beta		
(Const)	30.229	10.144		2.980	0.004
FINANCIAL BEHAVIOR	-.476	0.268	-1.270	-1.773	0.079
FINANCIAL LITERACY	-1.346	0.618	-1.054	-2.117	0.032
FINANCIAL BEHAVIOR* FINANCIAL LITERACY	0.038	0.016	1.886	2.330	0.022
R =	0.437[a]				
R-Square =	0.191				
Adj. R-Square =	0.166				

a. Dependent Variable: Insurance Investment Decision.
Source: Processed by the researchers, 2022.

Based on the moderated regression analysis summarized in the following Table 7, it can be said that financial literacy is associated with financial behavior and insurance investment decisions, as R-squared value increases from the simple linear regression (14.4%) to the moderated regression analysis (19.1%). Furthermore, considering the financial literacy as a moderating variable, the results of the moderated regression analysis found that the interaction value between the financial behavior and the financial literacy ($X*M=0.038$) is positive, indicating that the moderation of the financial literacy produces a positive influence on the pattern of the relationship between the financial behavior and the insurance investment decision. The Sig. t value for this moderation pattern is 0.022 or less than 0.05. We found that the moderating effect of financial literacy on the relationship between the financial behavior and the insurance investment decisions is significant.

The results show that financial behavior has a significant positive impact on insurance investment decisions of insurers. The majority respondents, who are female and have average age between 25 and 40 years old, are willing to invest in insurance to maintain effective financial behavior, even though they pay premiums by direct debit once a month, nearly all respondents said they were willing to invest in the best insurance products due to their financial literacy efforts.

The results of this study are similar to the research study of Özkoçak (2021), which found that financial behavioral overreaction that occurs in investors has a positive impact on investment decisions. In line with this, the findings research of Mai et al (2020), states that they use their financial behavior to make insurance related investment decisions because they trust that their decision to invest in insurance will facilitate their future financial management.

Based on the results of the descriptive statistics tests, it is known that the financial behavior variables are known to have minimum value of 33, a maximum value of 50, a mean of 41.65 and a standard deviation of 3.277. Then the financial literacy variable has a minimum value of 72, a maximum of 100, a mean value of. 97.51 and 3.720 standard deviations. In contrast, the insured investment decision variable has a minimum value of 12 and a maximum value of 20, with a mean of 17.42 and a standard deviation of 1.839.

Based on calculations, most respondents correctly answered questions about their knowledge of finance, savings and credit, and insurance. This proves that people with unit-linked insurance in East Java have good financial literacy. In contrast, the insured investment decision variable receives the lowest value. This is because it consists of only four metrics.

Financial literacy as a moderator variable has a significant positive impact on the pattern of the relationship between the financial behavior and insurance investment decisions. These results demonstrate that literacy has significant impact on customer's decision making when purchasing unit-linked insurance, which will be useful and valuable in the future. The results of this study therefore demonstrate that customer's financial literacy has a significant impact on their financial behavior in making insurance investment decisions. Therefore, the results of this study suggest that consumers are influenced by insurance related financial literacy, increasing the effectiveness their financial behavior when investing money in insurance.

CONCLUSION

Several conclusions can be drawn based on the results presented. Firstly, financial behavior as measured by planning, budgeting, management, and control has a significant positive impact on insurance investment. The results of this research suggest that customers are influenced by effective financial behavior. This means a bright future for insurance investments, especially in unit-linked. Second, the financial literacy as moderator is positive and important for the relationship between financial behavior and insurance investment decisions. This is also reinforced by the fact that customer's financial capabilities have significant impact on financial behavior when insurers make investment decisions. On the other hand, it was shown that the development of financial literacy towards investment insurance can be explained by genuine concerns about future financial management related

to their financial management related to their financial literacy implications. While the current Unit Link case may make consumers uneasy, they cannot change their minds about the risks posed by financial literacy inequalities.

The results of this study demonstrate the need for insurers to provide sound financial literacy, particularly relevant to insurance mediated in consumer decision-making processes. Insurers must instill a positive image and trust in their customers by helping them make purchasing decisions by communicating insurance that is appropriate to their circumstances and difficulties. As results customers are satisfied, buy the unit-linked insurance products they purchased, and pay term premiums.

Future research could now use this conceptual paradigm in other developing countries, other geographic regions, and cross-cultural contexts. Needs, uncertainties and risks in continues premium payment practices influence consumer decisions when purchasing unit-linked insurance products. Future researchers should therefore examine the impact of behavioral finance on increasing interest in insurance.

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