

## Investment Performance of Life Insurance Companies in Indonesia



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**ABSTRACT:** This study aims to examine the effect of volume of capital on investment performance moderated by leverage in life insurance companies in Indonesia. This topic was investigated because of the phenomena and differences in results regarding the low investment performance of several life insurance companies in Indonesia. The population of this study is established life insurance companies registered with the Financial Services Authority during the 2017-2021 period with a total sample of 116 taken using the purposive sampling method. The data analysis method used is moderate regression analysis with the results showing that the volume of capital does not affect investment performance, but after the volume of capital is moderated with leverage, it can affect investment performance.

**KEYWORDS:** Investment Performance, Leverage, Volume of Capital, and Life Insurance Companies.

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### I. INTRODUCTION

Investment performance is a factor that influences the success of insurance companies, banks and other financial institutions [17]. Good investment performance is the goal of investment activities. Investment performance measurement helps companies measure how much their investment goals have been achieved. The insurance company's investment performance helps formulate policies regarding the efficiency and effectiveness of investment decisions to strengthen the company's financial status [8]. Investment income can be used to evaluate the performance of an insurance company in allocating its assets to the appropriate investment portfolio [1].

Insurance companies as risk coverage institutions and customer fund managers must have the ability to manage investment assets properly to achieve company goals [15]. Investment activities involve high risk, so insurance company investments must be safe. Insurance is an institution that is expected to create calm when a risk endangers life and property [6].

An Insurance Company is a non-bank financial institution engaged in services to help the public overcome risks that will occur in the future. Compared to other business fields, insurance companies have their characteristics. Insurance is a financial institution that collects premiums from customers and then reinvests [16]. Insurance plays an essential role in supporting the economy through long-term investment products from insurance companies [19]. As a financial institution, insurance is tasked with supporting a circular flow of income, often referred to as a circular flow of income. Circular flow of income is an economic model that shows the circulation of money, goods and services between economic actors [14].

The insurance industry has experienced growth for five consecutive years. Insurance company assets continue to increase from 2016 to 2020 due to the strengthening of insurance companies in Indonesia. Total company assets in 2016 amounted to 1,002.83 trillion, 2017 amounted to 1,176.97 trillion, 2018 amounted to 1,249.05 trillion, 2019 increased to 1,357.14 trillion, and 2020 increased by 1,454.19 trillion. The proportion of insurance company assets consists of investment and non-investment assets; from 2016 to 2020 the ratio of insurance company assets has increased. Insurance company assets consist of investment assets and non-investment assets. In 2016 the total investment was 837.82 trillion, and the total non-investment assets were 165.01 trillion. In 2017 the total investment was 1006.12 trillion, and the total non-investment assets were 170.85 trillion. In 2018 the total investment was 1067.44 trillion, and the total non-investment assets were 181.61 trillion. In 2019 the total investment was 1134.36 trillion, and the total non-investment assets were 222.78 trillion. In 2020 the total investment was 1205.68 trillion, and the total non-investment assets were 204.07 trillion [21]. The investment funds are placed in securities issued by the government, mutual funds, bonds, time deposits, direct investments, certificates of deposit, investment properties and others. 36 trillion and total non-investment assets of 222.78 trillion. In 2020 the total investment was 1205.68 trillion and

## Investment Performance of Life Insurance Companies in Indonesia

the total non-investment assets were 204.07 trillion [21]. The investment funds are placed in securities issued by the government, mutual funds, bonds, time deposits, direct investments, certificates of deposit, investment properties, and others. 36 trillion and total non-investment assets of 222.78 trillion. In 2020 the total investment was 1205.68 trillion and the total non-investment assets were 204.07 trillion [21]. The investment funds are placed in securities issued by the government, mutual funds, bonds, time deposits, direct investments, certificates of deposit, investment properties, and others.

The growth in the number of operating companies and the increase in the number of assets of insurance companies is growing well from year to year. Based on this phenomenon, many studies have been conducted regarding investment performance, but several studies have shown that investment performance cannot be affected by the volume of capital [8], [20], and [5]. Referring to the phenomenon and the results of previous research, this study aims to analyze the effect of the volume of capital on investment performance is moderated by leverage because financial leverage refers to the amount of debt financing in the company's capital structure [7].

## II. LITERATURE REVIEWS

### 2.1 Life Insurance Company Investment Performance

Investment performance is a factor that influences the success of insurance companies, banks and other financial institutions [17]. Good investment performance is the goal of investment activities. Investment performance measurement helps companies measure how much their investment goals have been achieved. Size of investment performance helps formulate policies regarding the efficiency and effectiveness of investment decisions to strengthen insurance company finances [8]. Investments made in the correct sector will impact the insurance company's performance as a whole. In addition to premium income from customers, insurance company operational activities are financed from investment income [12]. Insurance companies are long-term investment financial intermediaries to finance company operations [3]

Measurement of investment performance can use investment income. Investment income can be used to evaluate the performance of an insurance company in allocating its assets to the appropriate investment portfolio [1]. Measurement of investment performance to assess the effectiveness and efficiency of the investment portfolio selected by the company. Life insurance runs an investment portfolio to get the best results while minimizing existing risks [7]. In addition to premium income, most of the life insurance company's revenue comes from investment returns.

### 2.2 Volume of Capital

The volume of capital describes financial strength and capital adequacy [8]. Money is invested by the capital owner to obtain income in the future. The amount of capital shows how the company's assets are financed and the company's ability to cover financial losses [4]. The Volume of capital is the amount of capital as measured by the book value of the company's equity [13]. The volume of capital is a measure of the book value of equity which will be used as a measure of capital and is measured by the natural log of the book value of equity [11]. The volume of capital can be used as a key indicator of financial health, and the prudential standards of insurance companies recognize the importance of adequate capital. Capital can protect and maintain the stability of the financial system.

### 2.3 Leverage

Leverage is often used to describe a company's ability to use fixed-load assets or funds to increase revenue. Leverage is an indicator used to determine a company's ability to pay its debts [10]. Leverage is a company's ability to convert liabilities such as unpaid premiums into productive assets to generate income [1]. Financial leverage reflects the ability of insurance companies to manage economic activity in response to unexpected losses [2]. Leverage can be used to measure the use of corporate debt. Leverage describes the relationship between total assets and common equity or indicates the use of debt to increase profits. Leverage can be measured using the ratio of debt to total assets.

### 2.4 Hypothesis

#### 2.4.1 Effect of Volume of Capital on Investment Performance

The amount of capital can describe the company's financial strength or capital adequacy ratio [8]. The capital owner invests capital to obtain income in the future. The amount of capital shows how the company's assets are financed and the company's ability to cover financial losses [4]. The volume of capital is the amount measured by the book value of the company's equity [13]. A high capital volume indicates that the company has sufficient capital and good resources. The higher the volume of capital, the higher the life insurance company's investment performance. Based on previous research, the hypothesis proposed in this study:

H<sub>1</sub>: The volume of capital affects investment performance.

## Investment Performance of Life Insurance Companies in Indonesia

### 2.4.2 Effect of Volume of Capital on Investment Performance Moderated by leverage

Agency theory explains that agency problems can arise due to differences in interests between management and capital owners. Agency problems can cause agency costs, encouraging managers to run the business more effectively and efficiently. Managers will try to manage leverage levels well. Leverage is an indicator used to measure the extent to which a company's assets and resources are financed by debt. Leverage is an indicator used to determine a company's ability to pay its debts [10]. A company's leverage refers to the amount of debt financing in the company's capital structure. If the company's management cannot manage the leverage level properly so that debt payments cannot be made, then the company will have a risk of bankruptcy [7]. Based on the theory and results of previous research, the hypothesis proposed in this study:  
H<sub>2</sub>: The volume of capital affects investment performance, which is moderated by leverage.

### III. METHODS

The population of this study is conventional life insurance companies registered with the Financial Services Authority during the 2017-2021 period with a total sample of 116 taken using the purposive sampling method. The Source of data in this research is secondary data. The data sources in this study are financial reports and annual reports that the Indonesia Stock Exchange, the Financial Services Authority and the official website of each company have published. Secondary data is data obtained by researchers indirectly. This data was obtained from library research on several books and notes related to research. This technique is carried out by collecting, classifying, analyzing and evaluating secondary data in the form of annual financial reports, independent auditor reports, annual reports and information that supports research related to each variable that will be tested on life insurance companies with business licenses from the Services Authority Finance.

#### 3.1 Variable Operational Definitions

The company's investment performance in this study was measured using the investment return ratio as a proxy for investment performance. The reason for using the investment return ratio as a proxy for investment performance is because investment reflects one of the main activities of the insurance business [9]. Investment is an integral function of insurance companies because its main role is to mobilize premium contributions received from participants in prudent investment activities to ensure that the funds sufficient to compensate for the participant's future claims. The return on investment ratio can be used to assess the investment policies carried out by insurance companies. The ratio refers to the profit earned. The higher the rate of return, the higher the income. Besides that, it can be used as a marketing tool to attract more participants to buy insurance policies. The investment performance will be greater if the income is higher than the average investment. The greater the value of Investment Yield, the greater the value of the investment performance of an insurance company. Based on this, the investment performance formula uses the following formula [7]:

$$IY = \frac{\text{Investment Income}}{\text{Average Investment}} \times 100$$

The volume of capital is a measure of the book value of equity which will be used as a measure of capital and is measured by the natural log of the book value of equity [11]. Book value provides information about the net worth of a company's resources. The volume of capital increases when the book value of equity increases. The higher the value of the importance of capital, the higher the investment performance of insurance companies. Based on this, the investment performance formula uses the following formula [7]:

The volume of capital = **Natural log book value of equity**

Leverage in this study is measured using the debt to equity ratio. The obligation to equity ratio is used to assess how much total equity is financed with total debt. The lower the debt-to-equity ratio indicates that the higher the level of funding provided by the owner will have an impact on improving the financial performance of a company and vice versa [10]. Leverage is greater when the total debt is greater than the total equity. The higher the leverage ratio, the lower the insurance company's investment performance. Based on this, the investment performance formula uses the following formula [7]:

$$\text{Leverage} = \frac{\text{total liabilities}}{\text{total equities}}$$

#### 3.2 Data analysis method

Descriptive statistical analysis in this study was seen from the maximum, minimum, average, and standard deviation values of the dependent variable, namely Investment yield, the independent variable, namely the volume of capital; and the moderating variable, namely leverage. The classic assumption tests in this study are normality, multi-collinearity, autocorrelation, and heteroscedasticity tests. Hypothesis testing is carried out if the data requirements must be normally distributed, not containing

## Investment Performance of Life Insurance Companies in Indonesia

multicollinearity and heteroscedasticity. Test the hypothesis in this study using regression and moderated regression analyses, with The significance level used as Sig. <0.05 means that the independent variable has a significant effect on the dependent variable, while the significance level of Sig. > 0.05 means that the independent variable has no significant effect on the dependent variable.

### IV. RESEARCH RESULTS

#### 4.1 Descriptive Statistical and Classic Assumption Analysis

Based on the results of the descriptive statistical test in Table 1 shows the value of each variable in this study. The investment performance variable has a minimum-2.12, max 15.19, and means 15.19. This indicates that the average life insurance company is able to generate an investment income of 6.7578% of the average investment assets used. The standard deviation of 3.76856 is lower than the average value which shows that the variation in investment performance values found in the sample companies has a small data distribution.

The variable volume of capital has minimums 25.41, max 30.38, and means 27.9017. This shows that the higher the value of the volume of capital, the higher the amount of equity owned by the company. The standard deviation is equal to 1.30301 smaller than the average value which indicates that the variation in the volume of capital found in the sample companies has a small distribution of data.

The leverage variable has a minimum of 0.01, max 1.46, and mean of 0.2748. This shows that the higher the value of debt compared to equity, the higher the company's leverage. The higher the leverage ratio, the higher the amount of company debt that must be paid in the short term and long term. The standard deviation is 0.22352, smaller than the average value, indicating that the variation in leverage found in the sample companies has a small data distribution.

**Table 1. Descriptive Statistics**

	N	Minimum	Maximum	Means	std. Deviation
KIP	116	-2.12	15.19	15.19	3.76856
VoC	116	25.41	30.38	27.9017	1.30301
Lev	116	.01	1.46	.2748	.22352
Valid N (listwise)	116				

This study has carried out classical assumption tests, namely the normality test, multicollinearity test, heteroscedasticity test and autocorrelation. Normality test using one-sample Kolmogorov Smirnov with a result of 0.200. This result means that the regression model meets the assumption of normality because the value of Sig. 0.200 > 0.05, namely the dependent and independent variables, have a normal distribution. The multicollinearity test shows the VIF of the volume of capital variable and is 1,000 and respectively, 1016 shows a VIF value of less than 10, it can be concluded that there is no multicollinearity in the regression model. The heteroscedasticity test shows the value of Sig. Volume of capital and leverage, each of 0.808 and 0.077 shows the value of Sig. > 0.05, it can be concluded that it did not happen heteroscedasticity. The autocorrelation test shows the value of Sig. Model 1 (the effect of the volume of capital on investment performance) and model 2 (the effect of the volume of capital on investment performance moderated by leverage) of 0.070 and 0.093 show the value of Sig. > 0.05, it can be concluded that it did not happen autocorrelation. The calculation results of the classical assumption test have met the limits of predetermined criteria so that a moderate regression analysis test can then be carried out, which is presented in Table 2.

**Table 2. The Result of Regression Test and Moderate Regression Analysis**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	std. Error	Betas		
1	(Constant)	.200	7,541		.027	.979
	VoC	.235	.270	.081	.870	.386
2	(Constant)	3,397	7,515		.452	.652
	VoC	.157	.267	.054	.587	.558
	MOD	-.133	.056	-.218	-2,369	.020*

\*Sig. level 0.05

## Investment Performance of Life Insurance Companies in Indonesia

The first hypothesis was rejected because of  $\text{Sig. } 0.386 > 0.05$  so it can be interpreted that the volume of capital has no effect on investment performance. However, after the relationship between volume of capital and investment performance is tested again by adding leverage as a moderating variable, it shows that the second hypothesis is accepted with  $\text{Sig. Level } 0.020 < 0.05$  which means that leverage can affect the relationship between the volume of capital and investment performance. The R square in model 1 (the effect of the volume of capital on investment performance) and model 2 (the effect of the volume of capital on investment performance moderated by leverage) is 0.007 and 0.054 which can be concluded that model 2 is more appropriate.

### V. DISCUSSION

High or low capital volume levels do not affect good or bad investment performance. The investment income obtained by the company remains high even though the level of volume of capital is low or high. This income comes from stocks, time deposits, bonds, government securities, gold, and other investment instruments. The amount of capital owned does not affect the company's investment income. So the volume of capital cannot be used as a benchmark for a company's investment performance. The results of this study are in contrast to agency theory when management tries to keep the level of volume of capital high to reduce agency costs. The high book value of equity cannot directly affect the performance of insurance companies.

The results of hypothesis testing show that leverage can affect the relationship between volume of capital and investment performance. High or low levels of leverage affect good or bad investment performance. A high level of leverage means that the value of the company's debt exceeds the value of equity. The level of leverage can measure how much the company's funding is financed with debt. The higher the company's dependence on debt, the lower the company's investment performance. The results of this study are in line with agency theory because management tries to keep the level of leverage low to reduce agency costs and improve the company's investment performance. Companies that have high debt levels are at risk of bankruptcy if they are unable to make debt payments.

### VI. CONCLUSION

Based on the results of analysis and data processing performed for examines the effect of volume of capital on investment performance moderated by leverage in life insurance companies in Indonesia. The volume of capital has no effect on investment performance, these results show that high and low volume of capital does not affect good or bad investment performance. While the volume of capital affects investment performance with leverage as a moderating variable, this shows that the lower the company's leverage level, the higher the investment performance. Conversely, the higher the level of corporate leverage, the lower the investment performance. So it can be concluded that the investment performance of life insurance companies in Indonesia cannot be directly influenced by volume of capital, but can be affected by volume of capital if moderated by leverage.

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## Investment Performance of Life Insurance Companies in Indonesia

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