

Stock Return: Debt to Equity Ratio (DER) and Return on Equity (ROE) in Real Estate and Property Industrial Companies

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Abstract

This study aims to determine the effect of Debt to Equity Ratio (DER) and Return on Equity Ratio (ROE) on stock returns. This research includes associative research. The population of this study are real estate and property industry companies listed on the Indonesia Stock Exchange (IDX) for the 2015-2018 period. Determination of the sample using purposive sampling method and there are 26 companies that meet the criteria as research samples. The results showed that the Debt to Equity Ratio (DER) had a negative but not significant effect on stock returns and Return on Equity (ROE) had a positive effect on stock returns.

Keywords

stock return; debt to equity ratio (DER); return on equity (ROE)



I. Introduction

Companies in increasing their profits can take various ways, one of which is by investing in the capital market. Investment activity is a delay in current consumption to be included in productive assets for a certain period of time (Hartono, 2014:5). The increase in the value of the company's shares, the higher the company value, the higher it will be (Katharina, 2021). In the current economic development, manufacturing companies are required to be able to compete in the industrial world (Afiezan, 2020). The existence of the company can grow and be sustainable and the company gets a positive image from the wider community (Saleh, 2019).

The current consumption delay is aimed at maximizing the expected return within acceptable risk limits for each investor. The most popular form of investment used is stocks. Investors in choosing stocks to invest in, many things must be considered. They will use various ways to obtain the expected return, either by conducting their own analysis of stock trading behavior or through advice given by capital market analysts such as brokers, dealer investment managers and others.

The capital market has an important role, considering that investment growth means that there is a circular economic movement, starting from the financial sector to the real sector (Darmawi, 2006: 9). The capital market is also said to have a financial function, because the capital market provides the possibility and opportunity to obtain returns for the owners of funds (Darmadji and Fakhruddin, 2013: 12). The existence of a capital market in Indonesia is marked by the number of investors who have invested their capital in the form of shares, especially in the Real Estate and Property Industry companies.

Real estate and property companies are important indicators to analyze a country's economic health and are also the first sector to signal the fall or rise of a country's economy (Oktavianti and Agustia, 2012). According to Ang (1997: 18) there are two factors that affect the stock return of an investment, namely internal and external factors of the company.

Internal factors that affect stock returns are Debt to Equity Ratio (DER) and Return On Equity (ROE).

A larger DER indicates that the capital structure of the business makes more use of debt relative to equity, thus reflecting higher corporate risk and investors will tend to avoid stocks that have a high DER value. Prihantini (2013) the use of debt by a company will increase the risk borne by shareholders. When there is an increase in the amount of debt in absolute terms, it will reduce the company's solvency level, which in turn will have an impact on decreasing the company's stock return.

Furthermore, ROE is a measure of the company's ability to generate profits by using its own capital. This ratio is obtained by dividing the profit after tax by the average equity. The higher the ROE also indicates the company's performance is getting better and has an impact on increasing the company's stock price. If the stock price increases, the stock return will increase. So theoretically it is possible that ROE has a positive effect on stock returns.

Based on the description above, in fact not all the theories that have been described above are in line with the existing empirical evidence. This is the same as the conditions that occurred in the Real Estate and Property industry listed on the IDX for the 2015-2018 period. The average stock returns of the real estate and property industries listed on the IDX for the 2015-2018 period can be seen in Table 1. below.

Table 1. Average Stock Return, DER, ROE

	2015	2016	2017	2018
Stock Return	0.39	0.34	-0.08	-0.08
DER	0.71	0.75	0.70	0.73
ROE	0.17	0, 14	0.12	0.15

Source: Processed Secondary Data, 2021.

Based on the table above, it can be seen that the condition of real estate and property industry companies listed on the IDX in the period 2015 to 2018 has fluctuated. The highest average stock return occurred in 2015 of 0.39, while the lowest average stock return occurred in 2017 and 2018 of -0.08. Based on the table above, the DER and ROE values show conditions that are inconsistent with stock returns. According to Ang (1997) the better the company's financial performance as reflected in the ratios, the higher the company's stock returns, as well as if the economic conditions are good, the reflection of stock prices will be better too.

Previous studies that have examined stock returns are Devi and Artini (2019), Alozzi and Obiedat (2016), Mailani et al. (2017), Ibrahim and Hussaini (2017), Nesa (2015), Abdullah et al (2015), and Acheampong et al. (2014). The formulation of the problem in this study is whether DER and ROE affect stock returns.

II. Review of Literature

2.1 Stock Returns

Jogiyanto (2015: 263) return is the return on investment obtained. Stock returns can be in the form of realization or results have occurred and Expected Returns or are not certain to occur but are expected to be in the future. The formula for calculating stock returns:

$$R_{it} = \frac{P_{it} - P_{it-1}}{P_{it-1}} \times 100\%$$

Description:

Rit = Stock Returns in the t-th period

Pt = t-year stock prices

Pt-1 = Stock prices before the t-th year

2.2 Debt to Equity Ratio

Debt to equity ratio according to Wiagustini (2013: 88) is a ratio that interprets the ratio between own capital and total debt, so that it can be seen how much the company is financed by loans from creditors. The formula for calculating the Debt to equity ratio:

$$DER = \frac{\text{Total Amoun of Debt}}{\text{Company Owner's Capital}}$$

2.3 Return on Equity (ROE)

Return on equity (ROE) is the company's ability to generate profits and can provide returns to shareholders. The greater the ROE, the greater the level of profit achieved by the company so that the problematic conditions are getting smaller. The ROE formula according to Kasmir (2016: 204):

$$ROE = \frac{\text{Net Profit}}{\text{Total Equity}}$$

2.4 Conceptual framework of Effect of DER on Stock Return

According to Prastowo (2010:62) DER in the company's solvency will show results that contain information on the company's ability to pay off its total obligations. DER is very commonly used to assess the condition of debt to the company's own capital. So that it is known the financial size of the company which is financed through loans from creditors. The high company finances are financed from creditor loans, it is possible that the stock price obtained will decrease, because the interest of investors and potential investors in investing their capital is decreasing due to the high risk they bear (Brigham and Houston, 2011: 188).

H1: Debt to Equity Ratio (DER) has an effect on Stock Returns the influence of ROE on Stock

Return On Equity (ROE) is a ratio to measure the company's ability to look at profits related to sales, total assets, and own capital where the company's ability is measured from the results advantages of using own capital. The greater the ROE, the greater the level of profit achieved by the company so that the problematic conditions are getting smaller.

H2: Return on Equity has an effect on stock returns

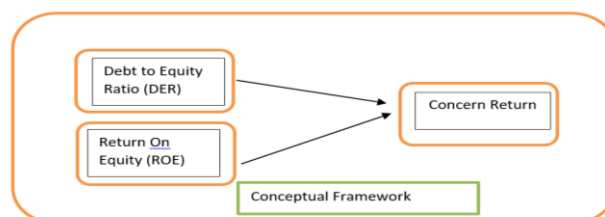


Figure 1. Conceptual Framework

III. Research Methods

This research is an associative type of research. Associative research is research that explains the relationship between two or more variables (Sugiyono, 2016: 61). The research population is Real Estate and Property Companies. Sampling using purposive sampling method so that the sample is 26 samples. Sources of data are secondary data in the form of studies of annual reports, books, journals, and articles related to the object of the research being conducted.

Data Analysis

The analysis technique used to solve the problem in this research is descriptive statistics, classical assumption test in the form of normality test, multicollinearity test, heteroscedasticity test, autocorrelation test, multiple linear regression analysis, and hypothesis testing in the form of t test.

IV. Discussion

4.1 Descriptive Statistics

Descriptive statistics are part of the data analysis used to provide an initial description of the research variables and are used to determine the characteristics of the sample used. Based on the calculations that have been carried out on each of the variables studied, it can be obtained from statistical variables that function to determine the characteristics of the data used. The descriptive statistics include the number of samples (n), average (mean), standard deviation, minimum value, and maximum value of each variable. Descriptive statistics seen from the number, minimum, maximum, mean and standard deviation can be seen in the following table:

Table 2. Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Return stock	104	-.875	.379150	1.341 .00836	DER
104	.001	3.701	.78874	.569295	ROE
104	000	3.142	.13032	.309904	Valid
N (listwise)	104				

Based on the table above explains the overall observation data from 36 sample companies obtained 104 observations. Stock returns where the minimum value of the company is -0.875, the maximum value is 1.341, the overall mean is 0.00836 and the standard deviation value is 0.379150.

The minimum DER value of the company is 0.001, the maximum value is 3,701. The average (mean) DER of the companies as a whole is 0.78874 and the standard deviation value is 0.569295, indicating that the DER data of the companies in this study are highly variable (mean value is greater than the standard deviation).

The minimum value of the company's ROA is 0.000, the maximum value is 3,142, the average (mean) ROA of the company as a whole is 0.13032 and the standard deviation value is 0.309904 indicating that the company's ROA data in this study is highly variable (mean value is smaller than standard deviation value).

4.2 Classical Assumption Test Results Classical

Assumption test is carried out to determine the condition of the existing data in order to determine the most appropriate analytical model to use Classical assumption test in this study consists of the Kolmogorov-Smirnov Test of Normality to test the normality of the data statistically, multicollinearity test using Variance Inflation Factors (VIF), autocorrelation test using Durbin-Watson and heteroscedasticity test using the Spearman-Rank test. The

4.3 Normality Test

The first tested was the Normality Test, normality testing using the *Kolmogorov-Smirnov* (KZ) test with a significant level of 5%. Based on the results of processed data through the normality test, a significant value of 0.145 above 0.05 means the data is normal.

4.4 Multicollinearity

This test will test Multicollinearity, which is tested by going through the VIF of each Independent Variable on the dependent variable. If $VIF < 10$ then there is no multicollinearity. The test results are shown in the table

Table 3. The Results of Multicollinearity Coefficients^a

Model		
	Tolerance	VIF
1 (Constant)		
DER	.993	1.007
ROA	.993	1.007

a. Dependent Variable: STOCK RETURN

Based on the results of the multicollinearity test above, it can be seen that the VIF value for DER and ROE is below 10.00, so there is no multicollinearity.

Table 4. The VIF Value Autocorrelation Test

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
.012	0.37681	1.117 a	Model	Summary	<
	1 ^{2.080}	.031			

b Predictors

a. : (Constant), DER, ROA

b. : Dependent Variable: STOCK RETURN

From the picture above, the DW value shows 2,080, so the value is 4 – dud 4 - dl then it can be concluded that there is no autocorrelation.

4.5 Results of Multiple Linear Regression Analysis

Table 5. The Results of Multiple Linear Regression Analysis
Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.093	.064		.151	DER
			1.447			
	-.117	.065	-.175	-1.784	.077	ROE
	.056	-.120	.046	.467	.641	a

. Dependent Variable: Stock Return

The equation for multiple linear regression analysis is as follows

$$Y = 0.093 - 0.117X_1 + 0.056X_2 + e$$

Based on the table above, the results of the research can be explained as follows:

- The value of the constant is 0.093. This shows that if the independent variable is constant then the *stock return* is 0.093.
- The regression coefficient X1 (DER) is negative, namely -0.117 which means that if DER decreases, this can cause *SHARE RETURN* to increase by -0.575 assuming the independent variable is considered constant.
- The regression coefficient X2 (ROE) has a positive value of 0.056 which means that if the ROE increases, the *Stock Return* will also increase by 0.056 assuming other independent variables are considered constant.

4.6 T Test Results

The t test is used to determine whether the independent variables have a significant or significant effect on the dependent variable. The T test aims to determine whether or not there is a partial (self) effect given by the independent variable (X) on the dependent variable (Y). Based on the picture above, Hypothesis 1 has a negative but not significant effect where the t value is -1.784 with a sig value of 0.077. Hypothesis 2 has a positive but not significant effect where the t value is 0.467 with a sig value of 0.641.

4.7 Effect of DER on Stock Returns

DER has an insignificant negative effect on stock returns with a regression coefficient X1 of -0.117 which means that if DER increases by 1 unit, stock returns will decrease by 0.117. The calculated t value obtained is smaller than the t table, which is $-1.784 < 1.66039$ and the sig value is 0.077 above 0.05. This shows that the effect of DER on stock returns has a negative but not significant effect. This research is in line with research by Devi and Artini (2019), Alozzi and Obiedat (2016), Abdullah et al (2015), and Acheampong et al. (2014). Research conducted by Mailani et al. (2017), Ibrahim and Hussaini (2017) and Nesa (2015) found the opposite result, namely DER has a positive effect on stock returns.

4.8 Effect of ROE on Stock Returns

ROE has a significant effect on stock returns, this is indicated by the regression coefficient X2 of 0.056 which means that ROE increases by 1 unit, then stock returns will also increase by 0.056 where the value of t count < t table is $0.462 < 1.66039$ where the value sig $0.641 > 0.05$. This means that the effect of ROE on stock returns is positive but not significant. This research is in line with Suantari (2016) and not in line with Laifa's research (2017).

V. Conclusion

5.1 Conclusion

Based on the results of the analysis, the conclusions in this study are:

1. Debt to Equity Ratio (DER) has a negative but not significant effect.
2. Return on Equity (ROE) has a positive but not significant effect.

5.2 Suggestions

Based on the results of the study and matters related to the limitations of the study, there are several things that need to be considered in the variables. Where there are other variables that affect stock returns, namely Current Ratio, Return on Assets (ROA), Net Profit Margin (NPM), Earning per Share, and others, the year of observation must be more than 4 years.

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