

# FACTORS AFFECTING THE RETURN STOCK COMPANY IN INDONESIA STOCK EXCHANGE (IDX) LQ45 IN YEARS 2012-2015

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## ABSTRACT

*This research aimed to determine the effect of partially and jointly independent variable of Debt to Equity Ratio (DER), Return on Assets (ROA), Return on Equity (ROE), and Net Profit Margin (NPM) against the dependent variable on the stock return. Objects of this research were companies listed on the Indonesia Stock Exchange (BEI) LQ45 continuously for four years in the period 2012-2015. Companies that qualify for this research were 28 companies. Based on this research, the conclusions indicate that all four independent variables; Debt to Equity Ratio (DER), Return on Assets (ROA), Return on Equity (ROE), and Net Profit Margin (NPM), either jointly or partially give the significant effect on return stock.*

**Keywords:** *debt to equity ratio (DER), return on assets (ROA), return on equity (ROE), netprofit margin (NPM)*

## INTRODUCTION

In early 2016, several industrial sectors show an encouraging increase in growth despite the relatively slow growth rate. In the midst of the current economic slowdown and many issuers decline, market participants are still optimistic about the possibility of improving the performance of listed companies in the future. That is what pushed investor interest as capital market players to collect some issuers Indonesia listing on the Stock Exchange (BEI) especially are always included in LQ45.

Investors who invest must make the choice of all instruments existing investments to avoid regret. According to Bodie et al., (2009), it can be regarded as an investment destination of choice (trade-off) between return and risk. It will provide a high risk high return and low risk, otherwise, the returns that generated would be too low. One of the financial instruments is the capital market. Understanding the stock market according to the Capital Market Law no. 8, 1995, it is an activity concerned with the public offering and trading of securities, public companies relating to securities issuance, as well as institutions and professions related to the effect. The capital market is a market peddle copies of financial instruments (Husnan, 2004). In the capital market investment decision, investors need consideration and calculation so that the funds invested is guaranteed to produce profits.

Investors are hoping for a return of the shares purchased. The rate of return is a major factor because the return is the result obtained from an investment (Jogiyanto, 2000). The investors in deciding to buy the stock can use technical analysis to look at a chart or technical indicators such as trading volume or share price. While fundamental analysis that investors can carry out a review, and assessment to measure the performance of companies based on financial ratios. The use of financial ratios in determining the investment policy has been widely used. To analyze the stock returns are fundamental ratio measured by Debt to Equity Ratio (DER), Return on Assets (ROA), Return on Equity (ROE), and the Net Profit Margin (NPM).

Research related to stock returns has been done. Natarsyah (2002) has stated that the research results in ROA and DER have significant positive effect on stock returns. Manurung (2006) has stated that DER has the positive effect on stock returns. While Suharli (2005) has stated that the DER has no significant effect on stock returns. Susanto (2010) has stated that based on the results of his research stating that ROE has the positive effect on stock returns, but DER have no effect on stock returns. Juwita (2013) has stated that based on the results of the study, ROE has the positive effect on stock returns. Desy (2012) has stated that DER has a significant negative effect on stock returns. While Heryawan (2013) and Astuti (2013) have declared that the NPM and ROA have the significant effect on stock returns. And lastly, Yuliaty (2008) has states that the Net Profit Margin (NPM) does not have significant effects on stock returns. Therefore, this article tries to determine the influence of Debt to Equity Ratio (DER), Return on Assets (ROA), Return on Equity (ROE), and the Net Profit Margin (NPM) on stock returns.

According to Brigham and Joel (2006), Return Equity is the difference between the amount received and the amount invested, and it is divided by amount invested. The results return that obtained from the investment can be the return realization that has already happened or the expectation return that has not happened yet, but it is expected to happen in the future (Jogiyanto, 2000). Husnan (2004) also has stated that the stock return is the result obtained from an investment. The results of the stock return are either profit or loss. Business investment in shares of an investor is always faced with the risk of unforeseen risks.

Debt to Equity Ratio (DER) is a ratio that compares the debt and equity (Husnan, 2004). In the financial management of the company, its goal is to increase the real debt financial performance. Firms will have difficulty doing business expansion if only rely on the capital only because it is needed debt. But keep in mind also if the company has a debt that exceeds the risk of capital, the liquidity becomes higher. This ratio is often used by analysts and investors to see how much debt the company when compared to equity held by the company or its shareholders. As the investors, we must also be careful in seeing this DER, because if the total debt is greater than the equity, then we need to look further if the current liability or long-term debt is greater. The level of risk the company can be demonstrated by looking at the ratio of DER. When the DER is lower, then automatically the risk level is also lower and vice versa. The formulation of DER can be seen below:

$$DER = \frac{\text{Total Debt}}{\text{Total Equity}} \quad (1)$$

Return on Assets (ROA) is a ratio to measure the effectiveness of management in generating profits with the assets available (Gitman & Zutter, 2015). The greater the total assets of the company, the better. Return on Assets (ROA) is positive if the total assets used for the company's operating profits can provide. And conversely, the negative ROA shows the total assets used do not give profit/loss. The formulation of ROA can be seen below:

$$ROA = \frac{\text{Net Profit After Taxes}}{\text{Total Assets}} \times 100\% \quad (2)$$

Return on Equity (ROE) is the ratio to measure the return earned on shareholders' investment in the company (Gitman & Zutter, 2015). ROE is very dependent on the size of a company, for example, for the small companies would have less capital, thus it will give the result of smaller ROE and vice versa for the large companies. This ratio is often also used to compare two or more companies on good investment opportunities and effective cost management. The formulation of ROE can be seen below:

$$ROE = \frac{\text{Net Profit after Taxes}}{\text{Total Equity}} \times 100\% \quad (3)$$

Net Profit Margin (NPM) is a ratio used to measure how much profit earned (Husnan, 2004). Net income is divided by net income as a percentage. The higher net profit margin would be more effective. So the higher of its net profit, the company will be more effective and healthier. But on the contrary, if the net profit generated by small companies, so the net profit is even smaller that companies can be a loss. So the company will usually compare the net profit margin in several years in a row to analyze whether the revenue is up or down load. Otherwise, if the number decreases, we can analyze the revenues are declining or rising and what is the causing of reduced profits. The formulation of NPM can be seen below:

$$NPM = \frac{Net\ Profit}{Sales} \times 100\% \quad (4)$$

Framework of the relationship between variables Debt to Equity Ratio (DER), Return on Assets (ROA), Return on Equity (ROE), and the Net Profit Margin (NPM) of the Stock Return can be seen in following Figure.

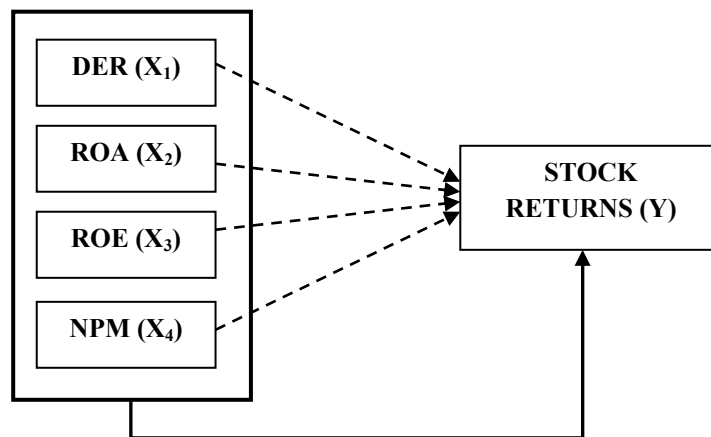


Figure Research Model

Based on the above conceptual framework (Figure), the research hypothesis can be formulated as follows: H1= DER, ROA, ROE, and NPM jointly effect on stock returns include in LQ45 that listed on the Indonesia Stock Exchange (BEI) for the consecutive four-year period from 2012 to 2015. H2= DER, ROA, ROE, and NPM partial effect on the stock return of LQ45 companies in the Indonesia Stock Exchange (BEI) for consecutive four-year period 2012-2015.

## METHODS

The populations in this article are the companies that included in LQ45 consecutively for 4 years in the Indonesian Stock Exchange, year period 2012-2015. The data in this article comes from secondary data that derived from the company's Financial Statements LQ 45 that published in the Jakarta Stock Exchange in particular from Indonesian Capital Market. Data analysis methods applied are the multiple linear analysis with the first in the classical assumption test. The regression equation is as follows:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e \quad (5)$$

$Y$  = Stock returns  
 $X_1$  = DER  
 $X_2$  = ROA  
 $X_3$  = ROE  
 $X_4$  = NPM  
 $\beta_0$  = *intercept* or constants  
 $e$  = *error*  
 $\beta_1 \beta_2 \beta_3 \beta_4$  = regression coefficient of each variable DER, ROA, ROE, NPM

## RESULTS AND DISCUSSIONS

Data obtained from BEI (www.idx.co.id) are respectively included in LQ45 for 4 years ie from 2012 to 2015 as many as 28 companies with 112 samples.

Table 1 Descriptive Statistics

	<i>N</i>	<b>Minimum</b>	<b>Maximum</b>	<b>Mean</b>	<b>Std Deviation</b>
RETURNSHM	112	-76,24	90,84	3,3345	30,73725
DER	112	0,16	7,52	1,6437	2,13622
ROA	112	1,69	71,51	10,9449	9,72313
ROE	112	2,25	125,81	21,6820	21,06353
NPM	112	2,76	71,73	19,2265	12,27412

*Source: Processed Data (SPSS Statistics 19)*

According to Table 1, it can be seen that the average return of shares amounting to 3,3345 with a standard deviation of 30,73725, and the lowest is -76,24 and the highest reaches 90,84. Table 1 shows that during the period 2012-2015, the average value of DER is at 1,6437 with the lowest is 0,16 and the highest is 7,52. The average value of ROA amounted to 10,9449 with the lowest is 1,69 and the highest reaches 71,51. The average value of ROE is equal to 21,6820 with the minimum one is 2,25 and the maximum is 125,81. The average value of NPM is equal to 19,2265 with the minimum one is 2,76 and the maximum is 71,73.

Before performing the regression model, a series of classic assumption aberration test needs to be done (Ghozali, 2013). Aberration test classic assumptions are used to determine whether there is multicollinearity, autocorrelation, and heteroscedasticity in the regression model to see if it has a perfect or near perfect linear relationship with a high correlation coefficient, or even close to 1. The tests to see the value of tolerance must be greater than 0,10 and the value of inflation factor (VIF) is smaller than 10 (Priyatno, 2008).

Tabel 2 Test Multicollinearity

<b>Model</b>	<b>Collinearity Statistics</b>	
	<b>Tolerance</b>	<b>VIF</b>
(Constant)		
DER	0,351	2,849
ROA	0,128	7,803
ROE	0,146	6,854
NPM	0,696	1,437

a. Dependent Variable: RETURNSHM  
*Source: Processed Data (SPSS Statistics 19)*

According to Table 2, it is found that the four variables of Tolerance value are more than 0,10 and VIF is less than 10. It is concluded that there is no multicollinearity between independent variables. A good regression model should not happen autocorrelation by looking at the Durbin-Watson value ranging from 1,55 to 2,46 (Priyatno, 2008).

Table 3 Test Autocorrelation

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin Watson
1	0,304	0,093	0,059	29,82065	1,676

a. Predictors: (Constat). NPM. ROA. DER. RPE

b. Dependent Variable: RETURNSHM

Source: Processed Data (SPSS Statistics 19)

Based on Table 3, it can be seen that the Durbin-Watson value is 1,676, and it is concluded that there is no trouble autocorrelation. To be able to use techniques heteroscedasticity oftest Spearman's rho correlation coefficient by using a significance level is 0,05, Priyatno (2008).

Table 4 Test Heteroscedasticity

			Unstandardized Residual	DER	ROA	ROE	NPM
Spearman's rho	Unstandardized Residual	Correlation Coefficient	1,000	0,58	0,066	0,101	-0,006
		Sig. (2-tailed)		0,541	0,489	0,288	0,950
		N	112	112	112	112	112
DER		Correlation Coefficient	0,058	1,000	-	0,005	0,211
		Sig. (2-tailed)	0,541		0,547	0,955	0,025
		N	112	112	0,000	112	112
ROA		Correlation Coefficient	0,066	-	1,000	0,682	0,106
		Sig. (2-tailed)	0,489	0,547		0,000	0,265
		N	112	0,000	112	112	112
ROE		Correlation Coefficient	0,101	0,005	0,682	1,000	0,527
		Sig. (2-tailed)	0,288	0,955	0,000		0,000
		N	112	112	112	112	112
NPM		Correlation Coefficient	-,006	,211	,106	,527	1,000
		Sig. (2-tailed)	0,950	0,025	0,265	0,000	
		N	112	112	112	112	112

\*\* . Correlation is significant at the 0,01 level (2-tailed).

\* . Correlation is significant at the 0,05 level (2-tailed).

Source: Processed Data (SPSS Statistics 19)

Based on the results of Table 4, the four independent variables generate significant value of more than 0,05 therefore there is no problem with heteroscedasticity. Testing multiple linear regression is useful to know the effect of variable rate debt to Equity Ratio, Return on Assets, Return on Equity, and Net Profit Margin on stock returns.

Tabel 5 Results Summary

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
{Constant}	-14,551	6,480		-2,246	0,027		
DER	1,142	2,237	0,079	5,110	0,011	0,351	2,849
ROA	0,420	0,813	0,133	5,517	0,007	0,128	7,803
ROE	0,054	0,352	0,037	3,152	0,019	0,146	6,854
NPM	0,533	0,276	0,213	2,929	0,006	0,696	1,437

a. Dependent Variable: RETURNSHM

Source: Processed Data (SPSS Statistics 19)

From the output results in Table 5, it can be formulated the equation multiple regression model as follows:

$$Y = -14,551 + 1,142X_1 + 0,420X_2 + 0,054X_3 + 0,533X_4 + e \quad (6)$$

Y = Stock returns

X<sub>1</sub> = DER

X<sub>2</sub> = ROA

X<sub>3</sub> = ROE

X<sub>4</sub> = NPM

Based on the regression equation above, it can be interpreted that the constant value is -14,551 which means that if the variable DER, ROA, ROE, and NPM do not exist, then there is a change in the shares amounted to -14,551. DER coefficient (X<sub>1</sub>) of 1,142 gives the positive effect on stock returns (Y), which means that if the variable DER increases, it will affect the stock return of 1,142%. ROA coefficient (X<sub>2</sub>) of 0,420 gives the positive effect on the stock returns (Y), which means that if the variable ROA increases will affect the stock return of 0,420%. ROE coefficient (X<sub>3</sub>) of 0,054 has the positive effect on stock returns (Y), which means that if the ROE increases, it will affect stock returns of 0,054%. NPM coefficient (X<sub>4</sub>) of 0,533 has the positive effect on stock returns (Y), which means that if the variable increases, the NPM will affect the stock return of 0,533%.

Hypothesis testing is done to see how far the simultaneous effect with the same dependent variables affect the dependent variable with test F and test t to determine the effect of the independent variables to partially dependent variable. Testing t test is used to determine whether partially independent variables DER, ROA, ROE, and NPM affect stock returns. Tests using a significance level is 0,05.

Based on Table 5, it can be seen that for the variable DER t count equal to 5,110 while t table is 2,273 and a significance level is 0,011. Because the value of t count is higher than t table (5,110 > 2,273) and the level of significance is 0,001 < 0,05, it can be concluded that the variable DER partially has the significant effect on stock returns. The results of this article are reinforced by research Natarsyah (2002) and Manurung (2006) which have stated that the variable DER has significant positive effect on stock returns, and it is contradicted with the research of Suharli (2005) which has stated that the DER has no significant effect on stock returns.

Based on Table 5, it can be seen that for ROA t count equal to 5,517 while t table is 2,273 and the significance level is 0,007. Because the value of t count is higher than t table (5,517 > 2,273) and the level of significance is 0,007 < 0,05, it can be concluded that the ROA variable partially has the significant effect on stock returns. The results of this study are reinforced by research of Natarsyah

(2002), Astuti (2013), and Heryawan (2013) that have stated that the ROA has significant positive effect on stock returns.

Then, based on Table 5, it can be seen that for ROE t count equal to 3,152 while t table is 2,273 and the significance level is 0,019. Because the value of t count is higher than t table ( $3,152 > 2,273$ ) and the level of significance is  $0,019 < 0,05$ , it can be concluded that the ROE partially has significant effect on stock returns. The results of this study are reinforced by research of Susanto (2010) and Juwita (2013) which have stated that the ROE has significant positive effect on stock returns.

Based on Table 5, it can be seen that for NPM variable t count equal to 2,929 while t table is 2,273 and a significance level is 0,006. Because the value of t count is higher than t table ( $2,929 > 2,273$ ) and the level of significance is  $0,006 < 0,05$ , it can be concluded that the NPM variable partially has the significant effect on stock returns. The results of this study are reinforced by the research of Heryawan (2013) and Astuti (2013), which have stated that the NPM significant positive effect on stock returns. However, this study is not consistent with research Yuliaty (2008) which has stated that the Net Profit Margin (NPM) does not significantly affect stock returns.

Analysis of variance (ANOVA) is used for testing the F test how significant influence of independent variables (DER, ROA, ROE, NPM) altogether may affect stock returns. Tests using a significant level of 0,05. It can be seen in Table 6.

Table 6 F Test (ANOVA)

Model	Sum of Squares	Df	Mean Square	F	Sig
Regression	9718,375	4	2429,594	2,732	0,033 <sup>a</sup>
Residual	95152,012	107	889,271		
Total	104870,388	111			

a. Predictors: (Constant), NPM,ROA, DER, ROE

b. Dependent Variable: RETURNSHM

Source: Processed Data (SPSS Statistics 19)

In testing the F test, it can be tested by looking at the value of F count  $>$  F table and a significant level are  $<$  0,05. Based on Table 6 that obtained F count equal to 2,732  $>$  2,457 with significantly is  $0,033 <$  0,05. So it can be concluded and proved that the independent variable DER, ROA, ROE, and NPM altogether significantly have the affect on stock returns that included in LQ45 in the Indonesia Stock Exchange respectively for the period 2012-2015.

## CONCLUSIONS

Based on the analysis and data as well as testing and discussion, this study results in several conclusions. The results are the t-test can be concluded that the independent variable of Debt to Equity Ratio (DER), Return on Equity (ROA), Return on Equity (ROE) and Net Profit Margin (NPM) partially prove significant effect on stock returns of companies included in LQ45 row participated during the four-year period from 2012 to 2015. Also, based on the test results F can be concluded that the independent variable of Debt to Equity Ratio (DER), Return on Equity (ROA), Return on Equity (ROE), and Net Profit Margin (NPM) jointly give significant effect on stock returns are LQ45 entry in a row during the 4-year period from 2012 to 2015.

Based on the research results and conclusions, it is suggested that there are many more variables that can be examined using the ratio of financial report that could affect stock returns in addition to the variable of Debt to Equity Ratio (DER), Return on Equity (ROA), Return on Equity (ROE), and Net Profit Margin (NPM). Another ratio includes variable EVA, CAPM, EPS, PER. For investors before deciding to buy shares should be supported by fundamental analysis by examining the performance of the company. In order to obtain the maximum return should also be considered factors such as Debt to Equity Ratio (DER), Return on Equity (ROA), Return on Equity (ROE), and Net Profit Margin (NPM).

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