

# Determinant Analysis of Stock Return in LQ45 Company

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**Abstract**--LQ45 Company is a company that has the highest stock liquidity on the Indonesia Stock Exchange. The index is selected every 6 months so that every 6 months companies that cannot maintain their liquidity will be delisted from the group of 45 blue-chip companies. This study aims to analyze the effect of firm size, debt to equity ratio and return on assets on stock returns in companies listed in the sector. The sampling technique used was purposive with the companies criteria that were recorded for more than 6 periods during 2013-2018, so that 19 companies were obtained. By using multiple regression analysis, the results of the study show that stock returns in this sector are not influenced by assets owned so assets are not strong enough to predict stock returns. Investors are actually more interested in using the debt to equity ratio and return on assets as predictors of stock returns. This study shows that debt to equity ratio has a positive effect on stock returns, while return on assets has a negative effect on stock returns on companies listed in LQ45.

**Key words**--LQ45, Stock Return, Indonesia Stock Exchange

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## I. INTRODUCTION

The urgency of establishing a business entity is in terms of profit optimization, prosperity of the principal and maximizing the value of the company which is reflected in the price of its shares. The purpose and expectations of investors in investing their funds in the capital market is to obtain return the maximum with certain risks. In this connection, financial information will be very useful for investors who will invest their capital in a company to assess how much improvement the company's financial performance and make predictions of the risks and benefits that will be received from the information obtained. Media that can be used to see the company's financial performance is the financial statements by analyzing financial ratios.

Indonesia has become one of the countries in Asia that provides investment opportunities that are large enough to become its own attraction to become a promising investment land. Even so, the price movement of the Composite Stock Price Index (CSPI) is always unpredictable, causing uncertainty of risk and return in investing. Whereas in Indonesia, the Composite Stock Price Index (CSPI) is the most important indicator of stock market work and preferred shares. This becomes a reference for investors from investors who want to invest through the capital market by purchasing shares of issuers on the Indonesia Stock Exchange.

Thus the higher the composite stock price index, the more likely the investor will obtain optimal stock returns. Stock return is one of the parameters considered by investors in carrying out investment decisions in a company. Stock returns are the results obtained from the investment or the level of profits enjoyed by investors

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for an investment made. A good level of return shows the company's good performance, so that if a company's ability to create profits increases, then the stock price is suspected to have the potential to increase.

The results of previous studies indicate that company size is a variable that is thought to influence stock returns (Banz, 1981; Keim, 1983; Dimson & Marsh, 1999). The large size of the company is expected to increase economies of scale and reduce the costs of information gathering and processing. Companies that have a larger size have a strong urge to present a high level of profitability compared to smaller companies because larger companies are examined and viewed more critically by investors. A large and well-established company will be easy to go to the capital market. Because of the ease of dealing with the capital market, it means greater flexibility and a greater level of investor confidence because it has greater operational performance. The larger the scale of the company, it is possible the company has the ability to diversify its business or develop its business scale so that with an adequate firm size will provide a positive sentiment for market participants related to the bona fide effect of the company. However, this statement contradicts the results of Fama and French's research (1992, 1995, 1996) showing that firm size is negatively related to stock returns. According to him, large companies were not responded positively by stock returns. This was confirmed also by the results of Dahoei and Saidi's (2012) research which conducted research on the Tehran Stock Exchange and Duy & Phuoc (2016) who conducted research on the Ho Chi Minh City Stock Exchange, Also Astakhov et al (2017) found that firm size negatively related to stock returns. Therefore, the inconsistency of the results of the study causes the importance of research to find definitive answers specifically to companies listed on the IDX in the LQ45 sector.

In addition, leverage is an important factor that concerns investors in investment decisions. Companies that have high leverage will be chosen by rational investors. Researchers with financial statement analysis approach will analyze leverage through Debt to Equity Ratio (DER) which is the solvency ratio. This ratio is related to the company's ability to repay debt. Companies that are able to return their debt well will increase investor confidence in the company and can affect the value of the company itself. The study of the relationship between leverage and stock returns has been conducted by Bhandari (1988). Another study that shows the direction of a definite relationship is the research of Al-Salamat and Mustafa (2016) who conducted research on the Amman Stock Exchange that showed a negative influence between capital structure and stock returns, the same result was conducted by Adami et al (2010) who conducted research on the London Stock Exchange, and Acheampong et al., (2014) who conducted research in Ghana. However, these studies can be refuted by Berggren and Bergqvist (2014) who conducted research on 50 companies in Sweden. His research successfully showed that financial leverage has a positive influence on stock returns.

Another factor that also determines the magnitude of stock returns is return on assets (ROA). This ratio illustrates the strength of a company's assets in generating profits for a certain period. Therefore this ratio is often used by analysts and researchers to measure a company's financial performance. According to Ang (1997) states that ROA is an important ratio in determining stock returns. So that investors also assume that the greater the ROA ratio, the company will have a large stock return as a form of company success in making profits. But it could also be that high ROA in this period would actually lead to a potential decline in ROA in the future so it does not rule out the high ROA that will cause low stock returns. Anwaar (2016) conducted research in companies listed on the London FTSE-100 Index showing a positive influence on ROA on stock returns. Likewise Erzad and Erzad (2017) who conducted research on the sharia stock sector conducted in the Jakarta Islamic Index found that

return on assets has a positive effect on sharia stock returns. While different results were shown by Manaje (2012) who conducted a study in the Philippines that ROA has a negative relationship with stock prices even though it is weak.

This research was conducted at the Indonesia Stock Exchange in the LQ45 sector, which is a group of companies that have high liquidity. Surely this sector has a lot of attention from investors because of the interest in this company that has good performance. Therefore, some predictors in previous studies will be tested again in this study to ascertain their impact on stock returns.

## **II. THEORETICAL STUDY**

According to Fahmi (2013: 358), return is the profit that companies, individuals, and institutions derive from the results of their investment policies. So it can be said returns stock are returns obtained by the investor of embedded capital on the stock exchange. Return or rate of return is the difference between the amount received and the amount invested, divided by the amount invested (Brigham and Houston, 2014). Playing stock has profit potential in two ways, namely the distribution of dividends and capital gains.

In fact, many factors affect the company's ability to achieve performance, this is not without cause because it will lead to the level of stock returns obtained to investors. Company size is one of the factors that is suspected to have an impact on stock returns. Certainly in accordance with some of the results of research that found a link between company size and stock returns (Dahoei, 2012) and reaffirmed by Duy and Phuoc (2016). No less important in the analysis of financial ratios that leverage is an important part that determines stock returns. Usually leverage is measured by the ratio of Debt to Equity Ratio (DER). This ratio is related to the ability of a company to return its debt. DER viz debt to equity ratio shows the extent to which funding from debt is used when compared to equity funding (Horne and Wachowicz, 2009). High ratios leverage endanger the company, because the company will be trapped in a high level of debt and difficult to release the debt burden. Decisions about the use of leverage must be carefully considered between the possibility of risk and the expected level of return that will be obtained. AL-Qudah Research (2013), and Ghi, (2015); shows that DER has a significant effect on stock returns. In addition, stock returns are also influenced by Return On Assets (ROA) in accordance with some previous studies (Anwaar, 2016; Atidhira and Yustina, 2017). This ratio focuses on the company's ability to obtain returns in its operations. Return On Assets are used to measure the efficiency and effectiveness of a company in generating profits by utilizing its assets. Return On Assets is the ratio between profit before tax to total assets. The greater Return On Assets (ROA) shows better performance, because the greater the rate of return. If the Return On Asset increases, it means the company's profitability increases, so that the final impact is the profitability enjoyed by shareholders.

## **III. RESEARCH METHODS**

### **3.1. Research Population**

The population of this study is the Indonesia Stock Exchange Issuer which includes LQ45 companies, the sampling technique uses purposive sampling with listed and consistently listed criteria in LQ45 issuers in the observation period of 2014 to 2018. This research is an explanatory research, meaning that this study will explain the variables studied or something (Cooper & Schindler, 2005).

### 3.2 Variable Operationalization

Variables used in this study consisted of four variables, namely:

1. Firm Size (indicator: Ln\_Total Asset);

Firm size is measured by the company's total assets and then natural logarithms are calculated, so it can be symbolized as follows:

$$\text{Firm size} = \ln_{\text{total assets}} \quad (1)$$

2. Leverage (indicator: Debt to Equity Ratio);

Leverage is calculated by a debt to equity ratio (DER) so that the following formula is used:

$$\text{Debt to Equity Ratio} = \frac{\text{Total Debt}}{\text{Equity}} \quad (2)$$

3. Profitability (indicator: Return on Assets)

Profitability is measured by return on assets (ROA), which is the ratio between net income and total assets. Then the following formula is used:

$$\text{Return On Asset} = \frac{\text{earnings}}{\text{total asset}} \quad (3)$$

4. Stock return (Indicator: capital gain (loss))

This ratio is calculated by comparing the current period stock price with the previous period stock price. Then the following formula is used:

$$\text{Capital gain (loss)} = \frac{P_t - P_{t-1}}{P_{t-1}} \quad (4)$$

Description:

$P_t$  = Stock price of the current period

$P_{t-1}$  = Stock price of the previous period

### 3.3. Data Analysis Techniques

Data Ratio-based Research Data, obtained from publicated sources Report LQ45 company finances The period 2014 to 2018. In this study the analysis techniques used are as follows:

#### 1) Classical Assumptions

Classical assumption tests are used to ensure quality and reasonable data used for multiple regression analysis. This test consists of multicollinearity test, Heteroscedasticity test, Autocorrelation test, and normality test.

#### 2) Model Selection

- Pooled Ordinary Least Square (Common Effect Model)

Is a data model approach is the simplest panel because it combines the data time series and crosssection. In this mode the dimensions of time and individuals are not considered, so it is assumed that the behavior of the

company data is the same over various time periods. This method can use the Ordinary Least Square (OLS) approach or the least-squares technique to estimate the panel data model.

- Fixed Effect Model

This model assumes that differences between individuals can be accommodated on the difference intercept. To estimate the model panel data Fixed Effect using variable techniques dummy to capture intercept differences between companies, intercept differences can occur due to differences in work culture, managerial, and incentives. However, the slopes are the same between companies. This estimation model is often called the technique Least Squares Dummy Variable (LSDV). In the method fixed effect, estimation can be done without weighting (no weight) or Least Square Dummy Variable (LSDV) and by weighting (Cross Section Weight) or General Least Square (GLS). The purpose of weighting is to reduce heterogeneity between units cross-section. The use of this model is appropriate for seeing changes data behavior of each variable so that the data is more dynamic in interpreting data.

- Random Effect Model

This model will estimate panel data where interruption variables may be interconnected between time and between individuals. In the model, Random Effect intercept differences are accommodated by the error terms of each company. The advantage of using the model is to Random Effect eliminate heteroscedasticity. This model is also called the Error Component Model (ECM). In the method Ordinary Least Square (OLS) it cannot be used to get an efficient estimator for the model random effect. So that the right method for estimating the model random effect is Generalized Least Square (GLS) with the assumption of homoscedasticity and no cross-sectional correlation.

#### **a) Panel Data Model Selection**

There are several tests that can be done to choose the most appropriate model to use in managing panel data, namely:

- F Statistical Test (Chow test)

This test is used to determine whether panel data regression techniques with the method Fixed Effect are better than regression models panel data without variables dummy or the Common Effect method by looking at sum of residuals (RSS).

- Lagrange Multiplier Test

To find out whether the Random Effect model is better than the OLS (Common Effect) method. The Bruesch-Pagan method for testing the significance of the model is random effect based on the residual value of the OLS method.

- Hausman Test

The Hausman test is used to choose between the Fixed Effect method and the method Random Effect

## **IV. RESULTS AND DISCUSSION**

### **4.1. Return Stock the Company LQ45 Indonesian Stock Exchange Issuers**

Based on research results show that returns the stock company issuers LQ45 Indonesian Stock Exchange period 2013 to 2018 has an average fluctuation. Figure 1 explains the condition.

Based on Figure 1 shows that the average returns stock at LQ45 companies during the study period fluctuated. This condition is caused by changes in stock prices every year. In 2013 the average level of returns stock was -4% and experienced a significant increase to 30% in 2014, which was the year with the highest average return stock. Furthermore, in 2015, the average return stock decreased significantly to -9%, which in 2015 was the year with the return lowest stock during the study period. Then, in 2016 again increased the 20%, but in the next two years, namely 2017 and 2018 the average return stock again decreased with the respective value amounted to 9% and -7%.

The condition of unstable stock returns in the LQ45 sector is certainly a problem that must be found immediately, especially for the interests of investors' investments. Investors expect that each investment will generate large profits so there must be an appropriate model to determine maximum results in obtaining stock returns in each investment activity.

The next step in this research is to find the factors that influence stock returns. The predicted variables are total assets, debt to equity ratio and return on assets. This study uses panel data so that the first step is to determine the best model for predicting stock returns.

### **4.2 Model Selection**

In panel data analysis there are three types of approaches that can be used, namely the ordinary / pooled least square approach, the fixed effect approach, and the random effect approach. The panel data test method was chosen for all sample data, namely 19 companies registered in LQ45 in 2013-2018 with semester data. This test is carried out to find out which model is most appropriate for the overall variable. The test results of the above approach are as follows:

#### **4.2.1. Chow test**

Chow test is used to determining whether method common or fixed effect that should be used to create a panel data regression. Based on data analysis conducted, the results of the Chow test using the Likelihood Ratio is the probability value Cross-section Fof 0.798 is greater than the value alpha 0.05 then  $H_a$  successfully rejected by accepting  $H_0$ . So that model used in panel data regression is the regression model common effect.

#### **4.2.2. Test Lagrange Multiplier**

Lagrange Multiplier Test is used to find out the best model between OLS methods (common effect). with random effects used in making panel data regression. Based on the analysis, the statistical test results Lagrange Multiplier obtained values Both Breusch-Pagan of 0,000 <0.05 so that the better model chosen is the random effect model method.

### 4.3 Hypothesis Testing

Based on the test specification model, the model used is the Random Effect by weighting General Least Square (GLS). The use of GLS is used to reduce heterogeneity between cross-section units and ignore the existence of autocorrelation that occurs because in the GLS method there is a weighting on data variations.

#### 4.3.1. Simultaneous Significance

Test F-statistic test is a model feasibility test used to see the effect of variables on the equation model, namely Firm Size, DER and ROA together in influencing the Return Stock variable. This test is done by looking at the value of prob (F-statistic) in the results table random effect model. The results of the analysis show a significance value of 0.039 (less than 0.05) with a coefficient of determination (R squared) of 3.6%, then the independent variable Firm Size, DER, and ROA simultaneously have a significant effect on Return Stock, so the analysis can proceed to partial testing.

#### 4.3.2. Partial Significance Test

In this analysis, the results of the study can be concluded as follows:

- 1) Firm Size: a coefficient value of -0.001 and a significance level of 0.612 ( $> 0.05$ ) means that the Firm Size Asset has no significant effect on Return Stock.
- 2) DER: a coefficient value of 0.02 and a significance level of 0.017  $< 0.05$  which means that DER has a significant positive effect on Return Stock.
- 3) ROA: a coefficient value of -0.0016 and a significance level of 0.0196  $< 0.05$  which means ROA has a significant negative effect on Returns Stock.

### 4.4. Relationship between Firm Size and Stock Return

Research results show that firm size has no effect on returns stock. Companies that have large wealth do not necessarily indicate that the company has a source of assets from operating profit or from the profit from the sale of shares. Financial statement analysis will analyze various sources of the increase in the company's wealth so that accounting has an assessment that the source of wealth can be from the company's profits and can also be from loans. These reasons reinforce the results of this study that statistically there is no significant relationship between company wealth with stock returns obtained.

Investors who will invest their funds in large companies will not necessarily produce returns high and small companies will also not necessarily produce returns low, so the level of risk received by investors is not determined by assessing the size of a company. Thus it can be concluded that firm size has no significant effect on returns stock.

This research is consistent with Suciati's research (2018) which states that firm size has no significant effect on returns stock. But it is not consistent with the research of Banz (1981), Keim (1983), Dimson & Marsh (1999) which states that firm size is one of the variables that affect returns stock. According to him that the size of a large company should be able to increase business scale and reduce costs so that profitability will increase. It will be a capital for investors who will invest in the capital market to choose large-sized companies. However, this has been denied by companies in the LQ45 sector. Companies in this sector have a high level of liquidity so stock returns are not determined by the size of the company's wealth but because of the more important liquidity

factors. This study adds to the diversity of results with previous studies which results in inconsistencies in results. So as a whole is still in accordance with Dimson and Marsh (1999) that the size of the company still has not given a definite effect on the capital market.

#### **4.5. The relationship between debt to equity ratio with returns stock**

The results show that the debt to equity ratio has a positive effect on returns stock. The positive influence shows that the company certainly needs additional capital when capital from the company's internal parties cannot meet the company's needs so the company needs additional capital from external parties. In addition, the high obligation of the company to the creditor can encourage the company in optimizing the company's performance so that there is a boost to the company's performance, of course, this can encourage investors' interest in investing so that it can directly influence stock prices related to returns stock. Investors always pay attention to the company's capital structure because the amount of capital owned will have a good effect on the company's short-term liquidity. The amount of the debt ratio in the leverage ratio shows how much capital from external parties to meet the needs of companies that can not be met by the company's internal capital so that the existence of the debt in the future may provide return a particularly good return stock company itself. In addition, the composition of the debt can make the company try to fulfill its obligations so that the company will encourage performance which of course it has a good impact for the company and also the company can utilize the debt well wherewith the debt is able to make the company more extensive and wider can generate more profits for the company because there is capital assistance from these external parties.

Companies that have an optimal capital structure, which is expressed as a combination of debt, preference and equity usually causes maximum stock prices (Brigham and Houston, 2014). These results are consistent with research conducted by Berggren and Bergqvist (2014) which shows that DER has a positive effect on returns stock. But it is not consistent with the research of Adami et al (2010), Acheampong et al., (2014), and Al-Salamat and Mustafa (2016), which shows that DER has a negative effect on returns stock. This study is a special finding that companies with high liquidity (listed in LQ45) have a source of funds from debt which causes the leverage ratio to rise. That is one of the factors that will increase stock returns.

#### **4.6. The relationship between return on assets with returns stock**

This study found that ROA negative effect on returns stock. Investors in investing will certainly pay attention to how the company is earning current profits and future profits, the acquisition of profits can determine the level of profits obtained by investors (dividends) if shared and the profits can guarantee how future investors when investing in the company. The existence of guarantees to investors caused by profits owned by the company then it raises the confidence of investors so that it will certainly have an impact on the return company's stock itself. But investors will not only analyze the needs at the time of initial investment, so investors will analyze the impact that occurs in the next period. If the profits obtained are too large at this time, then analysts will predict a decline in profits that will cause a decrease in the ROA ratio in the next period. This happens to companies listed in LQ45 because the listed companies are companies that have a high level of liquidity, not just profitability. So that in making investment decisions in this sector, investors will conduct a different analysis from other companies that have liquidity that is not as good as in LQ45. Therefore, the relationship that occurs is a negative relationship. This study is in line with research by Manaje (2012) and Atidhira and Yusnita (2017) which show that ROA has a negative effect on returns stock. This finding is important because the LQ45 sector is a company that has the



specificity of having the best level of liquidity among companies on the Indonesia Stock Exchange. In fact, researchers still find many results that ROA has a positive relationship with stock returns. Therefore there is still confusion among the results of existing research because some show a positive relationship and some have a negative relationship between performance and stock returns (Anwaar, 2016).

## V. CONCLUSION

This study explains that some estimating variables have mixed results, this is because the object of research between empirical studies with this research is different. Currently researchers are conducting research on the Indonesia Stock Exchange in the LQ45 sector, which is a list of companies that have a high level of liquidity. In this study provides a statistical answer that the size of the company does not have any effect on stock returns, while the debt to equity ratio is a variable that gives a positive influence on stock returns and returns on assets that gives a negative influence on stock returns.

This research has limitations, especially in the research period that is still very short so it needs to be added so that research can improve the quality of data. Variables also need to be added so that the research model becomes better with a higher r square value.

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