



The Effect Of Bi Rate And Exchange Rate On LQ-45 Index

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Abstract: The aim of this research is to examine the effect of the BI rate and exchange rate on the stock of LQ-45 index. The analytical method used in this study is multiple regression analysis. Before doing multiple regression analysis, it's a must to do a classic assumption test. This is necessary and important that the regression equation is to be BLUE (Best, Linear, Unbiased, Estimator). In addition to assessing the goodness of fit from a model, the researcher uses the coefficient of determination test, F test and t test which this research uses the yearly data from 2006 – 2015 for each variable. Results from this study indicates that the BI Rate rate negatively affects the stock of LQ-45 index with t value -2,849 and a probability value of 0,025. While the variables of Exchange Rate has a positive effect on LQ-45 index with t value of it is 2,475 and a probability value is 0,043. The value of R square is 63,5%. This means that 63,5 % theof LQ-45 index can be predicted from the movement of those two independent variables while the remaining 36,5% is influenced by other variables.

Keywords: BI Rate, Exchange Rate, LQ-45 index

INTRODUCTION

At this time the capital market is inseparable from the so-called stock price index (Dyatmiko, 2019). To find out how economic activity moves up and down, many people will see in terms of the index achieved at that time. In simple terms, the stock price index is a number used to compare an event with another event and also to compare the stock price from time to time whether a stock has decreased or increased compared to a certain time (Sahara, 2018). The capital market in Indonesia is still classified as a capital market whose thin transactions (thin market), namely the capital market where most of the securities are less actively traded. On the Indonesia Stock Exchange (IDX), the Composite Stock Price Index (IHSG) which includes all listed shares (most of which are less actively traded) is considered inappropriate as an indicator of market activity, therefore on February 23, 1997 another alternative index was introduced, namely the LQ-45 index (Hartono, 2013).

The LQ-45 index is a stock index indicator on the Indonesia Stock Exchange (IDX) where the index contains 45 issuers selected based on liquidity and capitalization as well as issuing shares which are included in the Bluechip stock category (Saerang & Ponto, 2011). The 45 companies listed on this index are companies that have the best stocks and have

even been selected through the criteria of the LQ-45 index. The following is the history of the LQ-45 index share price from 2006 to 2015.

The BI Rate is a policy interest rate that reflects the monetary policy stance or stance set by Bank Indonesia and announced to the public. The interest rate policy in Indonesia is directly controlled by Bank Indonesia through the BI rate. The interest rate is determined as a reference for the interest rates on loans and deposits. Banks in Indonesia must look at the Bank Indonesia (BI) interest rate as the basis for determining loan and deposit interest rates. However, Bank Indonesia (BI) is not coercive. This means that if Bank Indonesia (BI) sets the BI Rate at 6%, then banks may set interest on loans and deposits equal to or higher and lower than the BI Rate..

Another economic variable that can affect the stock price index on the Indonesia Stock Exchange (BEI) is the exchange rate. In Indonesia, if the Rupiah depreciates against the US dollar and can be predicted to strengthen in the coming period, investors tend to invest their capital in dollars in the hope that when the rupiah appreciates against the dollar, investors will sell it back in rupiah. Besides being an investment alternative, this exchange rate movement will have an impact on the export-import trade. This kind of condition will affect capital market activities and result in the movement of the stock price index on the Indonesia Stock Exchange (IDX).

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Capital Market

The capital market is a place to supply and to demand securities. This is where investors, namely individuals or business entities that have surplus funds, invest in securities offered by issuers (Sunariyah, 2011).

LQ-45 Index

The LQ-45 index is a calculation of 45 stocks selected through several selection criteria. In addition to assessing liquidity, the selection of these shares considers market capitalization (Sunariyah, 2011). The LQ-45 index contains 45 stocks adjusted every six months (at the beginning of February and August). Thus the stocks contained in the index will always change. Since it was launched on February 24th, 1997, the main measure of transaction liquidity is the value of transactions on the regular market (Sujarwo, 2019).

BI Rate

BI Rate is a policy interest rate that reflects the monetary policy stance set by Bank Indonesia (BI) and announced to the public. The BI Rate is announced by the Board of Governors of Bank Indonesia at every monthly Board of Governors Meeting (RDG) and implemented in monetary operations conducted by Bank Indonesia through liquidity management in the money market to achieve the operational targets of monetary policy (Putri, 2019; Yanuar, (2018). The operational targets for monetary policy are reflected in developments in the Interbank Overnight Money Market (PUAB O / N) interest rates. It is hoped that the movement in the interbank money market rate will be followed by developments in deposit rates, and ultimately bank lending rates. The determination of the BI Rate is highly influenced by economic factors. Bank Indonesia will raise the BI Rate if future inflation is estimated to be more than predetermined target, on the other hand Bank Indonesia (BI) will lower the BI Rate if future inflation is less than set target (www.bi.go.id) .

Exchange Rate

Exchange rate is the rate at which one currency will be exchanged for another, which is called a foreign exchange rate or exchange rate (Dominic, 2008). Meanwhile, according to the Indonesian Institute of Accountants (2004), the exchange rate is the ratio of the exchange of two currencies. The exchange rate is divided into nominal exchange rates and real exchange rates. The nominal exchange rate (nominal exchange rate) is the value a person uses when exchanging a country's currency for another country's currency.

Meanwhile, the real value (real exchange rate) is the value a person uses when exchanging goods and services from one country for goods and services from another country (Gregory, 2000). According to Gregory (2000), exchange rates fluctuating drastically out of control will cause difficulties for the business world in planning their business, especially for those who bring in raw materials from abroad or sell their goods on the export market. Management of a relatively stable currency value is one of the monetary factors that support the macro economy (Pohan, 2008)

METHODS

The object of this research is the LQ-45 index as the dependent variable and the BI Rate and exchange rate are as independent variables. The data reports taken are only in the form of LQ-45 Index issued by the Indonesia Stock Exchange (IDX) and data of BI Rate and exchange rates issued by Bank Indonesia (BI) for period from 2006 to 2015.2.

The data of BI Rate and exchange rate of Rupiah per US Dollar is taken from the official website of Bank Indonesia (www.bi.go.id) and data of the LQ-45 index is taken from the official website of the Indonesia Stock Exchange which is www.idx.co.id. All of data was collected from November 2016 to March 2017.

Population is a generalization consisting of objects or subjects that have the quality of certain characteristics set by researchers to study and draw conclusions (Sugiyono, 2013). The population in this study is the data of the BI Rate, exchange rate of Rupiah to Dollar and the stock of LQ-45.

The sample is the number and characteristics of the population (Sugiyono, 2013). Sampling in this study using non-probability purposive sampling technique, non-probability purposive sampling is a sampling technique taken from a population determined based on the criteria set in research (Sugiyono, 2013). The samples used in this research are the BI Rate, the exchange rate of Rupiah to US Dollar and the close price of LQ-5 index taken every December 31 from 2006 to 2015. This is the secondary data which has been tested for validation because it was issued directly from the official website, so researchers do not need to re-research to test its validation. The total number of data is 30 which consists of several data groups.

The data analysis model used in this study is to use quantitative analysis, namely by using numbers, formulas or mathematical models to determine whether there is a significant effect of economic variables in this case the BI Rate and the exchange rate of Rupiah to US dollar on the LQ-45 index period 2006-2015. In this study the authors uses the SPSS 20 for windows program and the analysis used was as the following :

1. Multiple Regression linier

To process, to discuss the data obtained and to test the hypothesis in this research, multiple linear regression analysis techniques were used (Ghozali, 2012).

2. The coefficient of determination (R^2)

According to Ghozali (2012) the coefficient of determination (R^2) is a tool to measure how far the model's ability to explain variations in the dependent variable. The coefficient of determination is either zero or one. A small value of (R^2) means that the ability of the independent variables to explain the variation in the dependent variable is very limited. On the other hand, if the value is close to 1, it means that the independent variables provide almost all the information needed to predict the dependent variables

3. F Test (Simultaneous)

The F statistical test basically shows whether all the independent variables or independent variables included in the model have a joint influence on the dependent variable (Ghozali, 2012). To test this hypothesis, researchers used F test, if the significant value is less than or equal to 0.05, then simultaneously the variables X_1 and X_2 have a significant effect on variable Y.

4. T test (Partial)

According to Ghozali (2012) the t-test is used to test how far the influence of the independent variables used in this study individually in explaining the dependent variable partially. The basis for making a decision used in the T test is as the following (Ghozali, 2012):

- a. If the significance probability value > 0.05 , then H_a is rejected. It means that the independent variable has no significant effect on the dependent variable.
- b. If the significance probability value ≤ 0.05 , then H_a is accepted. H_a cannot be rejected, which means that the independent variable has a significant effect on the dependent variable.

RESULT AND DISCUSSION

Classic Assumption Test

To strengthen the results of the regression obtained, which is a regression equation that has Best, Linear, Unbiased and Estimator (BLUE) properties, a classic regression assumption is tested, where the results obtained are as the following:

1. Normality test. Based on the output in SPSS, the data is normally distributed. This is indicated by an Asymp.Sig value of more than 0.05, namely 0.873. Then the research can be continued.
2. Autocorrelation test. Based on the Durbin-Watson test output, the DW value is 1.871 where $n = 10$ and $k = 2$, so of the table value, we obtained $dl = 0.6972$ and $du = 1.6413$ (Attachment 2). It can be seen that the value of DW (d) is greater than the value of du and less than the value of $4-du$ ($4-1.6413 = 2.3587$). Because $du < d < 4-du$ or $1.6413 < 1.871 < 2.3587$, the data in this study did not occur positive or negative autocorrelation.
3. Heteroscedasticity test

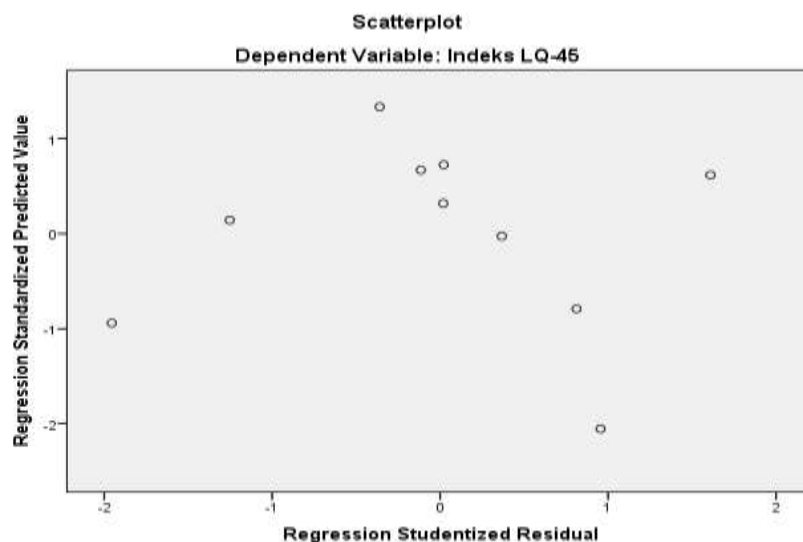


Figure 1. Scatterplot test

Based on the output above, it can be seen that the dots are scattered randomly and do not form a certain clear pattern. So it can be concluded that there are no symptoms of heteroscedasticity and the regression model is suitable for use.

4. Multicollinearity test

Multicollinearity test aims to test whether the regression model found a correlation between the independent variables (Ghozali, 2012). A good regression model should not have a correlation between the independent variables. Multicollinearity can be seen from the Tolerance and Variance Inflation Factor (VIF) values. Data can be said to be free from multicollinearity problems if it has a tolerance value greater than or equal to

0.10 and a VIF (Variance Inflation Factor) value less than or equal to 10 (Ghozali 2012). The summary of the multicollinearity test results is presented in table below:

Table 1. Multicollinearity test

Model		Collinearity Statistics	
		Tolerance	VIF
1	BI Rate	,970	1,031
	Kurs	,970	1,031

Source: Research data, 2020

Hypothesis testing

Hypothesis testing is carried out by multiple analysis consisting of the F test, t test, the coefficient of determination and correlation with a significant level of 5%.

1. F Test (Simultaneous)

Based on the output in table 4.5 above, the calculated F value is 6.076 using a confidence level of 95% and $\alpha = 5\%$, which means that the BI Rate and exchange rate variables together have a significant effect on the LQ-45 index stock price (H_{a3} accepted).

2. T test (partial)

a. The effect of the BI Rate on the stock price of the LQ-45 Index

Based on the output analysis, the t count of the BI Rate (X_1) variable is -2.849 and a significant t is 0.025 where the sig t is less than 5% ($0.025 < 0.05$), so partially the BI Rate (X_1) variable has a negative effect and significant to the LQ-45 index (Y). (h_{a1} Accepted).

b. The influence of the exchange rate on the LQ-45 index

Based on the output analysis, the t value is obtained from the variable exchange rate (X_2) of 2.475 and a significant t of 0.043 where sig t is less than 5% ($0.043 < 0.05$), then partially the variable exchange rate has a positive and significant effect on the LQ-45 (Y). ($H_{(a2)}$ Accepted).

3. The coefficient of determination test

Based on the output SPSS, the R-Square value obtained is 0.635 or equal to 63.5%. This shows that the BI Rate (X_1) and exchange rate (X_2) have contributed 63.5% to the LQ-45 index, while the remaining 36.5% is influenced by other factors or variables which are not included in this research.

4. Regression coefficient test

Table 2. Regression Test

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	672,918	331,947		2,027	,082
	BI Rate	-94,625	33,219	-,661	-2,849	,025
	Kurs	,062	,025	,574	2,475	,043

a. Dependent Variable: Indeks LQ-45

Source: Research data, 2020

Based on the regression results in table 4.8 above, the regression equation can be obtained as follows $Y = 672,918 - 94,625X_1 + 0.062X_2$

Based on the above equation, it can be interpreted:

1. The constant value of this regression equation is 672,918, which states that if there is no BI Rate and exchange rate, then the LQ-45 index is 672,918
2. The regression coefficient of the BI Rate (X_1) variable is -94.625 (minus sign means reverse), which shows that if the BI Rate increases by 1%, then the LQ-45 index will experience a decrease of 94.625, in this case other factors affect the LQ 45 index is constant.
3. The regression coefficient of the exchange rate (X_2) is 0.062 (positive value means unidirectional) indicates that if the exchange rate depreciates 1 Rupiah, then the LQ-45 Index has increased by 0.062, in this case other factors affect the stock price of the LQ-45 index is constant.

CONCLUSIONS

This research aims to determine the effect of economic variables such as BI Rate and exchange rate on the LQ-45 index. So based on the data that has been collected and the results of tests that have been carried out on problems with multiple linear regression models, it can be concluded as follows:

1. The BI Rate has a negative and significant effect on the stock price of the LQ-45 index. This is indicated by the regression coefficient obtained, namely -94.625 and t count of -2.849 with a probability of an error rate of 0.025 smaller than the expected significance level of 0.05 (H_{a1} accepted).
2. The exchange rate has a positive and significant effect on the LQ-45 index. This is indicated by the regression coefficient obtained which is equal to 0.062 and t count of 2.475 with a probability of an error rate of 0.043 smaller than the expected significance level of 0.05 (H_{a2} accepted)
3. Both the BI Rate and Exchange Rate have a significant effect on the LQ-45 index. This is indicated by the results of the F count of 6.076 with a probability of an error rate of 0.030 which is smaller than the expected significance level of 0.05. (H_{a3} accepted)

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