The Effect of Exchange Rate, Inflation, Gross Domestic Bruto, Return on Assets, and Debt to Equity Ratio on Stock Return in LQ45 Company

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ABSTRACT: This study aims to determine the effect of exchange rates, inflation, Gross Domestic Product, Return On Assets, and Debt to Equity Ratio on stock returns. The study uses secondary data in a period of 4 years from 2015-2018 in companies that listed in LQ45 Index. The sampling technique used a purposive sampling and the total sample of this research are 26 companies. The analysis method used in this research is multiple linear regression. The result of this study are (1) Exchange rate has a negative and significant effect on stock returns, (2) Inflation has a negative and not significant effect on stock returns, (3) Gross Domestic Product has a negative and not significant effect on stock returns, (4) Return on Assets has a positive and not significant effect on stock returns, (5) Debt to Equity Ratio has a negative and not significant effect on stock returns.

Keyword: Stock Returns, Exchange Rates, Inflation, GDP, ROA, DER

I. INTRODUCTION

Finance is always of great importance, be it in a business or in one’s everyday life. People confront financial crisis and need to tackle financial risks on a daily basis. Financial management can be done in some ways, one of them is investment. The basis of investment decisions consists of; the level of expected returns, the level of risk; and the relationship between return and risk. There are two type of return, expected return and actual return. (Tandelilin, 2010: 11). The most interesting investment for investors is stock. Stocks are securities that represent an ownership share in a company. For companies, issuing stock is a way to raise money to grow and invest in their business. For investors, stocks are a way to grow their money and outpace inflation over time. When you own stock in a company, you are called a shareholder because you share in the company’s profits. Public companies sell their stock through a stock market exchange (Hartono, 2017:199).

Stock investors earn money in two main ways: 1) Dividends, dividends are regular payments to shareholders. Not all stocks pay dividends, but those that do typically do so on a quarterly basis, 2) Capital gain, if the price of a stock goes up during the time they own it, and they sell it for more than they paid for it. Investors can use fundamental analysis to identify the intrinsic value of a stock. Fundamental analysis, in accounting and finance, is the analysis of a business's financial statements (usually to analyze the business's liabilities, assets, and earnings); markets and competitors. Fundamental analyze also considers the overall state of the economy and factors including production, earnings, employment, manufacturing, management, interest rate, government regulations. The fluctuation of stock price index is influenced by external and internal factors company (Tandelilin, 2010:51). The purpose of this study was to determine the effect of exchange rate, inflation rate, gross domestic product, Return on Asset, and Debt to Equity Ratio on stock return.

Exchange rate is the price of one country’s currency expressed in another country’s currency. The weakening of the exchange rate have negative effects to company such as; imported products become more expensive. When dollar exchange rate against the rupiah strengthens, the price of products needs to be adjusted. The weakening rupiah makes stock prices in Indonesia cheaper in the eyes of foreign investors holding the dollar. The weakening of the rupiah exchange rate resulted in the assumption of lost funds and make investors lose money (Tandelilin, 2010: 344).

Inflation is a sustained increase in the general price level of goods and services in an economy over a period of time. The negative effects of inflation include an increase in the opportunity cost of holding money and uncertainty over future inflation which may discourage investment and savings. Inflation can have a negative impact on fixed-income assets when it results in higher interest rates. As a consequence, stock prices drop, and the negative relationship between stock returns (Tandelilin, 2010: 342).
Gross Domestic Product (GDP) is the total monetary or market value of all the finished goods and services produced within a country's borders in a specific time period. GDP is a key tool to investors, guide policymakers and businesses in strategic decision making. As the stock market rises and falls, so too, does sentiment in the economy. This condition influenced the financial performance of companies. As sentiment changes into a bullish market, so does people's spending, which ultimately drives GDP growth. If consumers and companies have more wealth and confidence that leading to more spending and higher GDP, it will increase the stock prices (Tandelliliin, 2010: 342).

Investors analyze to evaluate the financial health of companies by scrutinizing past and current financial statements. Comparative data can represent how a company is performing over time and can be used to estimate likely future performance. The ratio that will be used in this study is profitability ratio and solvency ratio. Profitability ratio convey how well a company can generate profits from its operations. Profitability ratio that will be used in this study is Return on Assets (ROA). Return on assets (ROA) is an indicator of how profitable a company is relative to its total assets. The higher the ROA number, the better, because the company is earning more money on less investment. Companies that have high profitability will attract investors to buy their shares, so the company's stock prices go up. The increase in stock prices will increase stock returns too (Sartono, 2010:122).

Solvency ratios (financial leverage ratios) compare a company's debt levels with its equity, assets, or earnings, to evaluate the likelihood of a company staying afloat over the long haul, by paying off its long-term debt as well as the interest on its debt. Solvency ratio that will be used in this study is Debt to Equity Ratio. The ratio is calculated by dividing a company's total liabilities by its shareholder equity. In general, a company with a high DER ratio is considered a higher risk to lenders and investors because it suggests that the company is financing a significant amount of its potential growth through borrowing. Stock returns will decrease because of decreased investor demand (Husnan, 2015:80).

Price movements of the stock in Indonesia can be known through the stock price index contained on the Indonesia Stock Exchange. Index that is often used by investors is the LQ45 Index. The LQ45 index is an index that measures the price performance of 45 stocks that have high liquidity and large market capitalization that supported by good corporate fundamentals (www.idx.co.id). Investors need to know the factors that can influence stock prices fluctuation on the LQ45 Index to be able to choose the right company shares. This study aims to determine the effect of exchange rates, inflation, Gross Domestic Product, Return On Assets, and Debt to Equity Ratio on stock returns in LQ45 index.

II. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Financial crisis problem that occurred in various parts of the world has become a phenomenon in this millennium century. Money as a valid tool for transactions affect the country's economy. The exchange rate is the price of one currency in terms of another. Currency appreciation is an increase in the value of one currency in relation to another currency. The appreciates of the rupiah against the dollar is influenced by many things. When a country’s currency appreciates in relation to foreign currencies, foreign goods become cheaper in the domestic market and there is overall downward pressure on domestic prices. In contrast, the prices of domestic goods paid by foreigners go up, which tends to decrease foreign demand for domestic products (Nopirin, 2012:163). Investors will interested in buying shares which in turn will increase stock prices. The results of previous studies by Hutapea dkk (2014), Amrillah (2016), Indriastuti (2017), Andes dkk (2017), and Afriyanti (2018) showed that there was a negative and significant relationship between exchange rates and stock returns. Based on the description of empiricial studies, the research hypothesis can be formulated as follows:

H1: Exchange rates has a negative significant effect on stock returns.

Inflation is a sustained increas in the general prices level of goods and services in an economy over a period time. Then the price level rises, each unit of currency buys fewer goods and services; consequently, inflation reflects a reduction in the purchasing power per unit of money- a loss of real value in the medium of exchange and unit of account within the economy (Gentry and Wilkerson, 2018:208). The higher inflation will reduce the profitability of the company. The decreasing profit of the company is a bad information for traders on the stock market and may result in a decline in the company’s stock price.. The results of previous studies by Karim (2015), Mupamad (2016), Kristanto & Idris (2016), Hidayat dkk (2017), Basarda et al., (2018) showed that there was a negative and significant relationship between inflation and stock returns. Based on the description of empiricial studies, the research hypothesis can be formulated as follows:

H2: Inflation has a negative significant effect on stock returns.

Gross Domestic Product is a monetary measure of the market value of all the final goods and services produced in a specific time period. GDP is the sum of consumption, investment, government spending and net exports. If GDP rises, corporate earnings increase, which makes it bullish for stocks. The inverse occurs when GDP falls, leading to less spending by businesses and consumers, which drives the markets lower. However,
whether it’s a bull market or bear market, the stock market has some level of impact—albeit indirectly—on GDP and the economy as a whole. The results of previous studies by Saida et al., (2014) and Laichena & Obwagi (2015), Amitran et al. (2017) showed that there was a positive and significant relationship between GDP and stock returns. Based on the description of empirical studies, the research hypothesis can be formulated as follows:

H3: GDP has a positive significant effect on stock returns

Return on Assets (ROA) is one of the most important measures for evaluating how effectively a company’s management team is doing its job of managing the capital entrusted to it. Net income divided by total assets is actually the definition of ROA, which measures how efficiently management is using its total assets (as reported on the balance sheet) to generate profits (as measured by net income on the income statement). ROA helps investors measure how management is using its assets or resources to generate more income. ROA is the company’s ability to generate profits using existing total assets, with a high profit, the investors get a high return. The results of previous studies by Suhandi (2014), C.O. Trejo Pech et al. (2015), Nesa (2015), Anwar (2016), Standyarto & Sinu (2016), Gunartha & Dana (2016) showed that there was a positive and significant relationship between ROA and stock returns. Based on the description of empirical studies, the research hypothesis can be formulated as follows:

H4: ROA has a positive significant effect on stock returns

The debt to equity ratio is a measure of a company’s financial leverage, and it represents the amount of debt and equity being used to finance a company’s assets. It’s calculated by dividing a firm’s total liabilities by total shareholders’ equity. The debt to equity ratio is a simple formula to show how capital has been raised to run a business. For investors, the debt to equity ratio is used to indicate how risky it is to invest in a company. The higher the debt to equity ratio, the riskier the investment. The results of previous studies by Ratih & Sari (2014), Dewi, dkk. (2016), Eka (2016), Sudarsono & Sudiyanto (2016), Dedi, et al. (2018) showed that there was a negative and significant relationship between DER and stock returns. Based on the description of empirical studies, the research hypothesis can be formulated as follows:

H5: DER has a negative significant effect on stock returns

III. METHODS

This research is an associative research that is to find out the relationship between two or more variables. In this study discusses the influence of exchange rate on stock return, the influence inflation on stock return, the influence GDP on stock return, the influence ROA on stock return, the influence DER on stock return. The location of this research is in the LQ45 index. The object of this research is the stock return. The independent variables in this study are exchange rate, inflation, GDP, ROA, DER and the dependent variable used in this study is stock return. The type of data based in this study are: 1) Quantitative data in this study are stock price, USD/IDR exchange rates, inflation growth, GDP growth, ROA percentage, DER percentage. Data sources of this study are: www.finance.yahoo.com, www.bi.go.id, www.databank.worldbank.org, Indonesia Capital Market Directory (ICMD). The population in this study are 31 companies that always listed on the LQ45 index in 2015-2018. The number of samples used in this study are 26 companies. The sampling technique in this study is to use non probability sampling, namely by purposive sampling. Research data were collected using an observasi non participant method. The data analysis technique used in this study uses descriptive statistical analysis, classic assumptions analysis includes; normality test, autocorrelation test, multicollinearity test and heteroscedasticity test, multiple linear regression analysis includes; coefficient of determination (R²), F statistical test, and t statistical test (Ghozali, 2016:19).

IV. RESULT AND DISCUSSION

4.1 Description of Research Variables

Descriptive data analysis is used to determine the description of the variables in this study includes; Exchange Rates (X1), Inflation (X2), Gross Domestic Product (X3), Return on Assets (X4), and Debt to Equity Ratio (X5) and Stock Return (Y). Based on descriptive statistical analysis obtained sample description as follows.

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Return</td>
<td>104</td>
<td>-63.80</td>
<td>176.24</td>
<td>-.7889</td>
<td>35.56119</td>
</tr>
<tr>
<td>Kurs</td>
<td>104</td>
<td>-2.602</td>
<td>10.342</td>
<td>3.86475</td>
<td>5.076521</td>
</tr>
<tr>
<td>Inflasi</td>
<td>104</td>
<td>-19.928</td>
<td>19.536</td>
<td>-3.86475</td>
<td>5.076521</td>
</tr>
<tr>
<td>PDB</td>
<td>104</td>
<td>4.88</td>
<td>5.17</td>
<td>5.0375</td>
<td>.10476</td>
</tr>
<tr>
<td>ROA</td>
<td>104</td>
<td>-7.0</td>
<td>46.66</td>
<td>10.1092</td>
<td>10.32877</td>
</tr>
<tr>
<td>DER</td>
<td>104</td>
<td>.15</td>
<td>3.83</td>
<td>1.1490</td>
<td>.90866</td>
</tr>
<tr>
<td>Valid N</td>
<td>104</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
4.2 Classic assumption test

The classic assumption test is a technique used to determine the validity of the data collected before testing by multiple linear regression analysis. The test conducted in this study is the normality test, autocorrelation test, multicollinearity test, and heteroscedasticity test.

The normality test determine to testing the residuals of the regression model that are made are normally distributed or not. This research uses the Kolmogorov-Smirnov non-parametric statistical test.

Table 2: Normality Test Result

<table>
<thead>
<tr>
<th>Unstandardized Residual</th>
<th>N</th>
<th>Kolmogorov-Smirnov Z</th>
<th>Asymp. Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>104</td>
<td>1.235</td>
<td>0.095</td>
</tr>
</tbody>
</table>

Based on the normality test results, the Asymp 2-tailed significant value 0.095 is bigger than 0.05, this shows that the data that used in this research are normally distributed.

Autocorrelation test is intended to determine whether in a multiple linear regression model was no correlation between bullies error in period t with an error in period t-1 (previous). This research used the Durbin Watson test.

Table 3: Durbin Watson Test Result

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>Durbin-Watson</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.343a</td>
<td>.118</td>
<td>.073</td>
<td>34.24430</td>
<td>1.898</td>
</tr>
</tbody>
</table>

Based on the analysis results, can be formulated du <(4-du) = 1.7823 <1.898 <2.217. This indicates that the data are not negative or positive autocorrelation, so this study is free from autocorrelation.

Multicollinearity test determine to test whether the regression model has a correlation between independent variables. Regression model can be used if there is no correlation between independent variables.

Table 3: Multicollinearity Test Result

<table>
<thead>
<tr>
<th>Model</th>
<th>Tolerance</th>
<th>VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exchange Rates</td>
<td>0.373</td>
<td>2.684</td>
</tr>
<tr>
<td>Inflation</td>
<td>0.208</td>
<td>4.811</td>
</tr>
<tr>
<td>GDP</td>
<td>0.408</td>
<td>2.452</td>
</tr>
<tr>
<td>ROA</td>
<td>0.989</td>
<td>1.011</td>
</tr>
<tr>
<td>DER</td>
<td>0.994</td>
<td>1.005</td>
</tr>
</tbody>
</table>

Based on the multicollinearity test results of the analysis presented, it shows that the tolerance value of the five independent variables is more than 0.10 and the VIF value of the five variables is less than 10. This shows that the five variables do not contain symptoms of multicollinearity.

Heteroscedasticity test determine to test whether in the regression model there is an inequality of variance from the residuals of one observation to another. A good result is a regression model without heteroscedasticity.

Table 4: Heteroscedasticity Test Result

<table>
<thead>
<tr>
<th>Model</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (Constant)</td>
<td></td>
</tr>
<tr>
<td>Exchange Rates</td>
<td>0.310</td>
</tr>
<tr>
<td>Inflation</td>
<td>0.716</td>
</tr>
<tr>
<td>GDP</td>
<td>0.829</td>
</tr>
<tr>
<td>ROA</td>
<td>0.464</td>
</tr>
<tr>
<td>DER</td>
<td>0.772</td>
</tr>
</tbody>
</table>

Based on the analysis heteroscedasticity test results showed the significance value of the five independent variables is bigger than 0.05. Exchange rates 0.310, inflation 0.716, GDP 0.829, ROA 0.464 and DER 0.772. The result means that there is no heteroscedasticity on the five independent variables.

4.3 Test Multiple Linear Regression Analysis
Regression analysis used in this research is multiple linear regression. Multiple regression analysis was conducted to test the effect of two or more independent variables (exchange rates, inflation, GDP, ROA, DER) to the dependent variable of the dependent variable (stock return). The analysis was processed using the Statistical Package for Social Science (SPSS) program version 24.0. The results of the analysis are as follows:

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
</tr>
<tr>
<td>1 (Constant)</td>
<td>77.909</td>
<td>255.690</td>
</tr>
<tr>
<td>Exchange Rates</td>
<td>-2.958</td>
<td>1.089</td>
</tr>
<tr>
<td>Inflation</td>
<td>-.155</td>
<td>.259</td>
</tr>
<tr>
<td>GDP</td>
<td>-13.617</td>
<td>50.438</td>
</tr>
<tr>
<td>ROA</td>
<td>.057</td>
<td>.328</td>
</tr>
<tr>
<td>DER</td>
<td>-1.498</td>
<td>3.724</td>
</tr>
</tbody>
</table>

**Table 5: Multiple Linear Regression Analysis Result**

Based on the test results, we obtain the following linear regression equation:

\[ Y = -0.422X_1 - 0.125X_2 - 0.040X_3 + 0.017X_4 - 0.038X_5 + e \]

Based on the regression equation, the result can interpreted as follows:

- **X1**: -0.422, meaning that exchange rate has a negative influence on stock return in LQ45 index. So, the lower the exchange rate then the stock return will increase.
- **X2**: -0.125, meaning that inflation has a negative influence on stock return in LQ45 index. So, the lower the inflation then the stock return will increase.
- **X3**: -0.040, meaning that GDP has a negative influence on stock return in LQ45 index. So, the lower the GDP then the stock return will increase.
- **X4**: 0.017, meaning that ROA has a positive influence on stock return in LQ45 index. So, the higher the ROA then the stock return will increase.
- **X5**: -0.038, meaning that DER has a negative influence on stock return in LQ45 index. So, the lower the DER then the stock return will increase.

The coefficient of determination used to determine the effect of independent variables on the dependent variable. The coefficient of determination is essentially measuring how far the model's ability to explain variations in the dependent variable. The value of R Square in this study is 0.118, which means 11.8 percent of the stock return variable is influenced by the variable exchange rates, inflation, GDP, ROA, DER. The remaining 88.2 percent is explained by other variables outside the regression model used.

Based on the test results of the analysis, the F test significance value of 0.000 is less than 0.05 (0.000 < 0.05). This means that the exchange rates, inflation, GDP, ROA, DER variables simultaneously influence stock return and the regression model is appropriate for use in this research.

Based on the analysis results, it is obtained the significance value of the t test of exchange rates variables is smaller than 0.05. This means that the exchange rates variables partially have a significant effect on repurchase intention. The significance value of the t test of inflation, GDP, ROA and DER variables is bigger than 0.05. This means that the exchange rates variables partially have a non significant effect on repurchase intention.

**V. HYPOTHESIS AND RESULT**

**The effect of exchange rate on stock return**

Hypothesis testing on the effect of exchange rate on stock return shows that exchange rate has a significantly negative effect on stock return. Thus the lower the exchange rate then the stock price will increase. If stock prices increase, investors will responding positively because they will get capital gain which is one component of stock return. The results of this study reinforce previous studies conducted by Hutapea dkk (2014), Amrillah (2016), Indriastuti (2017), Andes dkk (2017), and Afiyanti (2018) concluded that exchange rate effect has a negative and significant effect on stock return.
The effect of inflation on stock return
Hypothesis testing on the effect of inflation on stock return shows that inflation has a non significantly negative effect on stock return. Thus the lower the inflation then the stock price will increase. If stock prices increase, investors will responding positively because they will get capital gain which is one component of stock return. The results of this study reinforce previous studies conducted by Amitra et al., (2017), Ayu and Wiksuana (2017) concluded that inflation effect has a negative and non significant effect on stock return.

The effect of GDP on stock return
Hypothesis testing on the effect of Gross Domestic Product on stock return shows that GDP has a non significantly negative effect on stock return. Thus the lower the GDP then the stock price will increase. If stock prices increase, investors will responding positively because they will get capital gain which is one component of stock return. The results of this study reinforce previous studies conducted by Husein and Mahfud (2015), Saragih (2018), and Sri, dkk. (2019) concluded that GDP effect has a negative and non significant effect on stock return.

The effect of ROA on stock return
Hypothesis testing on the effect of Return On Assets on stock return shows that ROA has a non significantly positive effect on stock return. Thus the lower the ROA then the stock price will increase. If stock prices increase, investors will responding positively because they will get capital gain which is one component of stock return. The results of this study reinforce previous studies conducted by Juanita &Ayu (2016) concluded that ROA effect has a positive and non significant effect on stock return.

The effect of DER on stock return
Hypothesis testing on the effect of Debt to Equity Ratio on stock return shows that DER has a non significantly negative effect on stock return. Thus the lower DER then the stock price will increase. If stock prices increase, investors will responding positively because they will get capital gain which is one component of stock return. The results of this study reinforce previous studies conducted in APT Framework. International Journal of Economics and Management, 11(SpecialIssue1), 197–206.

VI. CONCLUSION
Based on the data analysis result and discussion in the previous, the conclusions of this study are as follows: 1) Exchange rates has a negative significant effect on stock return, 2) Inflation has a negative non significant effect on stock returns, 3) Gross Domestic Product has a negative non significant effect on stock returns, 4) Return On Assets has a positive non significant effect on stock returns, and 5) Debt to Equity Ratio has a negative non significant effect on stock returns.

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