The Influence of Macroeconomic Factors toward Stock's Return

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This study aims to understand the correlation between the macroeconomic factors toward the stock's return. The variable used as the macroeconomic factors are inflation, interest rate and exchange rate. This research is motivated by the unstable movement of the macroeconomic factors and the decline of the stock price. The method used in this research is verification and qualitative method. The population in this research is chemical and basic industry companies listed on the Indonesia Stock Exchange (IDX) in the period of 2013-2016. The sampling method to determine the sample used in the research is the purposive sampling method. To analyse the data, the author used the multiple linear regression analysis. The research found that partially inflation, interest rate and current exchange have a significant influence on stock's return. While simultaneously, all of the variables have significant influence toward the stock's return.

Key words: *Macroeconomic, stock's return.*

Introduction

A company is a business entity that runs its business with the aim of earning profit (profit oriented). The increasingly high development of the global economy makes competition in the business world increasingly complex. This requires every company to improve its performance in order to be able to compete with its competitors. The economic development of a country can be measured in various ways, one of which is to know the level of development of the capital market and the development of various types of industries in the country (Wicaksana, 2012). In 2015, based on the information quoted from the article www.market.bisnis.com entitled "Sectoral Index October 13: All Weakened, Basic and Chemical Industry Are the Most Depressed". The article stated that the Basic and Chemical Industry sector index was down the sharpest and suppressed the movement of the composite

stock price index (CSPI). The Basic and Chemical Industry sectors were observed to lead the decline, dragged down by shares of cement companies namely INTP 3.61%, SMGR 1.18%, and SMCB 2.62%. JCI was observed to decline by 1.65% or 76.34 points to 4,554.37. This weakening occurred along with the decline in all stock sectors listed on the IDX. The Mandiri Sekuritas Research Team said that currently stocks are either overbought or oversold and very vulnerable to correction.

In 2016, based on information quoted from the article www.cnnindonesia.com entitled "In a Week, Basic Industrial Sector Shares Become Favourite", this week's sectoral index looks different when compared to previous weeks. Of the 10 sectors listed on the Indonesia Stock Exchange (IDX), the basic industrial sector led sectoral indices throughout the week. Based on IDX data, the basic industrial sector rose to 2.77 percent from the level of 524,422 to 538,952. According to Panin Sekuritas analyst Purwoko Sartono, the strengthening of the basic industrial sector was driven by the strengthening of the shares of cement companies. Nevertheless, Purwoko stressed that there was still an oversupply from cement sales in Indonesia. Thus, the reinforcement that occurs in this basic industrial sector may only be short-term. Not surprisingly, the performance of the stock issuers is still stuck until the third quarter of this year (Audriene, 2016).

The decline in stock prices can be caused by the company's fundamental factors, namely the condition of several macroeconomic factors including inflation, interest rates, and exchange rates. The interest rate is one of the macroeconomic factors that has empirically been shown to have an influence on the development of investment in several countries (Tandelilin, 2010: 213). The interest rate is the price of the loan. The interest rate is expressed as a percentage of the principal per unit of time.

The weakening of the exchange rate of the domestic currency against foreign currencies and price expectations (expectation theory) led to increased prices of imported raw materials, which in turn would increase production costs. Furthermore, this increase in production costs leads to increased selling prices at the producer level and prices at the consumer level (inflation). An exchange rate is a sum of money from a particular currency that can be exchanged in units of another country's currency. The rupiah exchange rate has a major influence on companies that rely on imported raw materials. Basically, the exchange rate is the price of a currency against other currencies (Arifin and Hadi, 2009: 82). Based on data obtained from Bank Indonesia and the Indonesia Stock Exchange regarding inflation, interest rates, exchange rates, and stock returns in the Basic and Chemical Industry companies listed on the Indonesia Stock Exchange for the period 2013-2016, as follows:

Table 1.1: Comparison of Inflation, Interest Rate, Exchange Rate, and Stock Return Ratios in Basic and Chemical Industry Companies Listed on the Indonesia Stock Exchange Period 2013-2016

Year	Inflation	Interest Rate	Exchange Rate	Stock's *Return*
2013	6,44%	6,46%	10.457	-0,556
2014	6,42%	7,54%	11.869	-0,008
2015	6,38%	7,52%	13.390	-0,258
2016	3,53%	5,90%	13.308	0,068

Source: Processed Data (bi.go.id dan www.idx.co.id)

Table 1.1 above shows that in 2014-2015 the inflation rate has decreased, while the value of stock returns has also decreased. This shows the existence of a gap between inflation and stock returns. In addition, this is inversely proportional to the theory which states that relatively inflation has a negative effect on stock returns (Tandelilin, 2010: 343). In 2013-2014 the value of interest rates has increased, while the value of stock returns has increased. In addition, in 2014-2015 the value of interest rates has decreased, while the value of stock returns has decreased. This shows a gap between interest rates and stock returns. In addition, this is inversely proportional to the theory which states that interest rates have a negative effect on stock returns. High interest rates reduce the present cash value of future cash flows, thereby reducing the attractiveness of investment opportunities (Bodie et al., 2014: 178).

In 2013-2014 the rupiah exchange rate increased, while the value of stock returns increased. This shows the existence of a gap between the rupiah exchange rate and stock returns. In addition, this is inversely proportional to the theory which states that the strengthening of the domestic exchange rate against foreign currencies will reduce the cost of importing raw materials for production which will cause investors to buy shares, which results in increased stock prices and stock returns (Tandelilin, 2010: 344).

Investment is a form of fund management to provide benefits by placing the funds in an allocation that is expected to provide additional profits. Generally, investment is divided into two, namely real investments such as land, machinery or factories and financial investments such as stocks and bonds (Fahmi, 2012: 3). Stock is one of the most sought-after capital market instruments by investors, because it is able to provide attractive returns. Stock is a paper that is clearly stated in nominal value, company name, and followed by the rights and obligations that have been explained to each holder (Fahmi, 2012: 81). While the stock price also reflects the value of a company. The stock price is the value of shares in rupiah formed as a result of buying and offering shares on the stock exchange by fellow exchange members (Hadi, 2013: 179).

In the context of investment, return is one of the factors that motivate investors to invest and is a reward for the courage of investors to bear the risks they face (Tandelilin, 2010: 102). Return is the rate of return which is the difference between the amount received and the amount invested, divided by the amount invested (Brigham and Houston, 2011: 215). Decrease in the value of the stock index performance can be caused by internal factors or external factors of the company (Olkiewicz, 2018). For that investors before making investment decisions, need to analyse the movement of shares. Broadly speaking, the analysis in predicting future stock price movements is divided into two ways, namely fundamental analysis (fundamental analysis) and technical analysis (technical analysis) (Darmadji and Fakhruddin, 2012: 149).

The decline in stock prices can be caused by the company's fundamental factors, namely the condition of several macroeconomic factors including inflation, interest rates, and exchange rates. Inflation in general can be interpreted as an increase in general prices continuously for a certain period. Inflation is a change in prices that tends to increase, without being offset by changes in people's purchasing power that are increasing. Inflation is a condition where the price of goods increases continuously or in other words the value of the currency decreases. The inflation rate that can affect economic stability (Semadiasri et al., 2015).

The interest rate is one of the macroeconomic factors that has empirically been shown to have an influence on the development of investment in several countries (Tandelilin, 2010: 213). The interest rate is the price of the loan. The interest rate is expressed as a percentage of the principal per unit of time. Interest is a measure of the price of resources used by debtors that must be paid to creditors. High interest rates reduce the present cash value of future cash flows, thereby reducing the attractiveness of investment opportunities (Bodie et al., 2014: 178).

The weakening of the exchange rate of the domestic currency against foreign currencies and price expectations (expectation theory) led to increased prices of imported raw materials, which in turn would increase production costs (Hussain, Ali, Thaker & Ali, 2019). Furthermore, this increase in production costs leads to increased selling prices at the producer level and prices at the consumer level (inflation). An exchange rate is a sum of money from a particular currency that can be exchanged in units of another country's currency. The rupiah exchange rate has a major influence on companies that rely on imported raw materials. Basically the exchange rate is the price of a currency against other currencies (Arifin and Hadi, 2009: 82). Based on the description above, the researcher intends to describe the schema of the framework as a form of researchers' flow of thinking, as follows (Fatula, 2018):

The weakening of the exchange rate of the domestic currency against foreign currencies and price expectations (expectation theory) led to increased prices of imported raw materials, which in turn would increase production costs (Sanchez, 2018). Furthermore, this increase in production costs leads to increased selling prices at the producer level and prices at the consumer level (inflation). An exchange rate is a sum of money from a particular currency that can be exchanged in units of another country's currency. The rupiah exchange rate has a major influence on companies that rely on imported raw materials. Basically the exchange rate is the price of a currency against other currencies (Arifin and Hadi, 2009: 82). Based on the description above, the researcher intends to describe the scheme of the framework as a form of researchers' flow of thinking in a form of research paradigm, as follows:

Figure 1.1. Research Paradigm
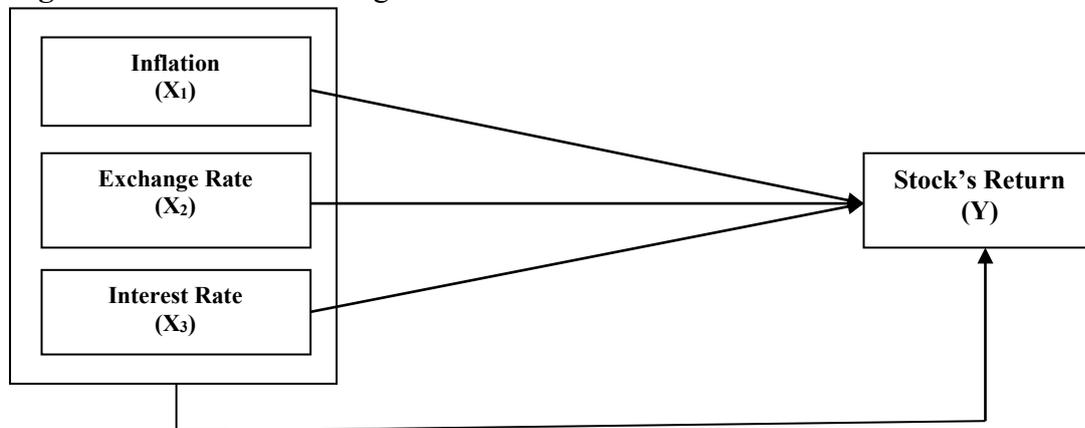
Research Methodology

The research method used in this research is the verification research method. According to Nazir (2011: 91) defines that what is meant by the verification method is a research method that aims to determine the causal relationship between variables through a hypothesis testing through a statistical calculation so that it can be produced proof that the hypothesis is rejected or accepted. The population in this study is the Basic Industry and Chemical sector companies listed on the Indonesia Stock Exchange for the period 2013-2016, totalling 70 companies. The sampling technique used in this study is non probability sampling with a purposive sampling method. According to Sugiyono (2017: 84) states that the notion of non-probability sampling is a sampling technique that does not provide the same opportunity / opportunity for each element or member of the population to be selected as a sample.

Variable	concept	Indicator	Measurement	Scale
Inflation (X₁)	Inflation is a continuous process of increasing general prices of goods. (Nopirin, 2012:25)	Consumer Price Index (Bank Indonesia, 2017)	$I_t = \dfrac{(IHK_t - IHK_{t-1})}{IHK_{t-1}}$ (Bank Indonesia, 2017)	Ratio
Interest Rate (X₂)	Bank interest rates can be interpreted as reciprocal services provided by banks based on the principle of conversion to customers who buy or sell their products. (Kasmir, 2012:154)	BI *rate* (Bank Indonesia, 2017)	Percentage of Interest rate based on BI *rate* (Bank Indonesia, 2017)	Ratio
Exchange Rate (X₃)	The exchange rate is the price of one currency in other currency units specified in the foreign exchange market. (Manurung dan Manurung, 2009:95)	1. Selling rate 2. Buying rate (Bank Indonesia, 2017)	$\text{Middle rate} = \dfrac{(\text{sell rate} + \text{buy rate})}{2}$ (Simi dkk, 2015)	Ratio
Stock's Return (Y)	*Return is the profit obtained by companies, individuals, and institutions from the results of the investment policies that they do.* (Fahmi, 2012:189)	1. Stock Price (Fahmi, 2012:189)	$R_t = \dfrac{(P_t - P_{t-1})}{P_{t-1}}$ (Horne dan Wachowicz, 2012:116)	Ratio

The data analysis method used in this study is quantitative analysis. Quantitative analysis is a research method that is based on the philosophy of positivism, used to examine certain populations or samples, data collection using research instruments, quantitative / statistical data analysis, with the aim of testing the predetermined hypothesis (Sugiyono, 2017: 13). Analysis of the data used in this study are descriptive statistics, classic assumption tests, multiple linear regression, hypothesis testing (t and F), and determination coefficient. Multiple linear regression testing can be done after the model of this study fulfil the requirements of passing from classical assumptions. For that before testing the hypothesis with multiple linear regression analysis, classical testing must be done first. The classic assumption test in this study was used to test the error of the regression model used in the study. Classic assumption test is a requirement that must be fulfilled so that the regression equation can be said as a good regression equation, meaning that the resulting regression equation will be valid if used to predict. The classic assumption test is usually often used in multiple regression equations. A regression model will be used to do a forecasting, a good model is a model with minimal forecasting errors. Therefore, a model before being used should fulfil a number of assumptions, commonly called classic assumptions. Testing this classic assumption is done first before the formation of a regression model, so that the regression model formed will produce an estimate that is BLUE (best linear unbiased estimator) (Santoso, 2012: 342). The tests used were normality test, multicollinearity test, heteroscedasticity test, and autocorrelation test.

According to Sugiyono (2017: 275) states that multiple linear regression analysis is used by researchers, if the researcher intends to predict how the conditions (criteria), if two or more independent variables as predictor factors are manipulated (increase the value decreases). So multiple linear regression analysis will be carried out if the number of independent variables is at least two. In this study there is one dependent variable (Y) and three independent variables (X). The multiple linear regression equation in this study as the research model conducted by is as follows:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + e$$

Keterangan:
Y   = Stock's *Return*
a   = Constanta
b   = Regression Coefficient
X_1 = Inflation
X_2 = Interest Rate
X_3 = Exchange Rate

Results and Discussion

The data used in this research have gone through the classic assumption test which are the normality test, multicollinearity test, heteroscedastic test and the autocorrelation test. After the classic assumption test is done, we can analyse the regression model. Regression analysis is used to determine the relationship that exists between variables so that the relationship obtained can be estimated by one variable, if the price of other variables is known. The equation of the regression model used by the writer is the equation of multiple regression models (multiple regression analysis). Based on the results of testing multiple linear regression obtained the following results:

Table 3.1: Multiple Linear Regression

Dependent Variable: RETURN_SAHAM				
Method: Least Squares				
Date: 02/13/18 Time: 21:46				
Sample: 1 47				
Included observations: 47				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
INFLATION	-0.129819	0.022654	-5.730564	0.0000
INTEREST RATE	-1.248888	0.414267	-3.014693	0.0043
EXCHANGE RATE	0.388124	0.058231	6.665203	0.0000
C	-2.047854	0.220695	-9.279117	0.0000

Source: Output Eviews 7

Regression models formed based on the results of the study are as follows:

$Y = -2{,}047854 - 0{,}129819 \, X_1 - 1{,}248888 \, X_2 + 0{,}388124 \, X_3$

Based on table 4.10, the partial test results are as follows:

1. Based on the results of the t test (partial) in the regression model, the variable significance value of inflation was obtained at 0.0000 <0.05 (significant level of research significance). In addition, it can be seen also from the results of the comparison between tcount and ttable which shows the value of tcount of 5.730, while the t table is 1.681. From these results it can be seen that tcount> t table is 5.730> 1.681, it can be concluded that H1 is accepted, meaning that partially the inflation variable has an effect on the variable return of shares.

2. Based on the results of the t test (partial) on the regression model, the variable significance value of interest is 0.0043 <0.05 (the significance level of the research significance). Besides that, it can also be seen from the results of the comparison between tcount and ttable which shows the value of tcount of 3.014, while the t table is 1.681. From these results, it can be seen that tcount> t table is 3.014> 1.681, it can

be concluded that H2 is accepted, meaning that partially the interest rate variable influences the variable stock return.

3. Based on the results of the t test (partial) on the regression model, the exchange value variable significance value is 0.0000 <0.05 (significant level of research significance). Besides that, it can also be seen from the results of the comparison between tcount and ttable, which shows the value of tcount of 6.665, while the ttable is 1.681. From these results it can be seen that tcount> t table is 6.665> 1.681, it can be concluded that H3 is accepted, meaning that partially the exchange rate variable affects the stock return variable.

Table-4.11: Simultaneous Hypothesis Testing.

R-squared	0.796435	Mean dependent var	-0.271766
Adjusted R-squared	0.782233	S.D. dependent var	0.036000
S.E. of regression	0.016799	Akaike info criterion	-5.253685
Sum squared resid	0.012135	Schwarz criterion	-5.096226
Log likelihood	127.4616	Hannan-Quinn criter.	-5.194432
F-statistic	56.07822	Durbin-Watson stat	2.286100
Prob(F-statistic)	0.000000		

Source: Output Eviews 7

Based on the results of hypothesis testing (F test) in table 4.11 above, the significance value of the regression model simultaneously is 0,000, this value is smaller than the significance level of 0.05 (5%), which is 0.0000 <0.05. Besides that, it can also be seen from the results of the comparison between Fcount and Ftable, which shows that the Fcount value is 56.078 while Ftable is 2.82. From these results, it can be seen that Fcount> Ftable is 56.078> 2.82, it means that simultaneously the variables of inflation, interest rates, and exchange rates influence the stock return variable. Based on the results of testing the coefficient of determination in table 4.12 above, it shows that the R2 value is 0.796 which means that the variability of the dependent variable is stock returns which can be explained by independent variables namely inflation, interest rates, and exchange rates in this study amounting to 79.6% while the remaining 20.4% is explained by other variables outside the research model.

Conclusion

Based on the results of the study showed that inflation affects stock returns. Rising prices for manufactured goods are a problem for the company. Rising prices of manufactured goods cause an increase in operational costs so that it will reduce company profits. The decline in profits has an effect on dividends distributed to shareholders. High inflation results in a decline in people's purchasing power. Inflation that is too high can also result in a decrease in

the real income of investors from their investments. Increased inflation has resulted in an increase in selling prices and production costs of the company. Another result of the study show that interest rates affect stock returns. The increase in loan interest rates has a negative impact on each issuer, because it increases the interest expense on loans and reduces net income. The interest rate has a negative effect on stock returns. Changes in interest rates cause changes in the interest rates that are hinted at in a security. Meanwhile, related with the exchange rate, the study show that the exchange rate affects stock returns. The rise in stock prices will occur because of the depreciation of the rupiah against foreign currencies, which has led to a rise in the demand for capital in the capital market. The strengthening of the domestic exchange rate against foreign currencies is a positive signal for the economy that is experiencing inflation. Strengthening the domestic exchange rate against foreign currencies will reduce the cost of importing raw materials for production and will reduce the prevailing interest rates. This will cause investors to buy shares which results in an increase in stock prices and stock returns.

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