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Macroeconomic Factors and Influence on Stock Return That Impact the Corporate Values

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Abstract

This research aims to determine the influence of macroeconomic variables on stock return and its impact on corporate values. This research became a repenting to be done because of the rapidly changing global situation, and the number of focus that affects back stocks, so that investors need to know which macro economic factors are most noteworthy, while For our company put the value of the company as consideration for management in the decision making. The population in this research is the sector of agriculture because based on the results of the sector's observation, the most severe decline in performance among others. Further sampling is done by the purposive sampling method, so from 22 companies that listings only 15 companies that meet the criteria. The analytical technique to be used in this study is to use a double linear regression analysis technique expanded with a pathway analysis method to obtain a comprehensive picture of the relationship between variables of one variable with other. We find is an inflation and interest rate negatively and significantly affecting the return of shares. The exchange rate positively and significantly affects the stock return and the influential stock return rate positively and significant to the corporate values.

Keywords: *Inflation; interest rates; exchange rate; stock return; corporate values*

JEL Classifications: *G20; G40*

Introduction

During the 2014-2018 periods, the Indonesian economy only grew on average in the 5% range, the number has not been able to reach the government target which is 7%. Although the country developed, especially the United States economy showed more solid recovery. While emerging economies, especially China, experienced a structural slowdown, thereby triggering the decline in commodity prices, which in turn continued to suppress Indonesia's export performance. The decline in commodity prices and the uncertainty over speed and magnitude of interest in the United States have increasingly impacted the worsening economic performance of the developing world. The rapid growth of the American economy and the increase of the Federal Reserve Funding Rate made investors withdraw their funds in developing countries and then put them in America. The Indonesian economy is heavily influenced by the trade war between China and the United States. This is because the two countries are the largest trading country of Indonesia. Please note, every 1% decline in China's economy will impede Indonesia's growth of 0.11%. While the decline of 1% in the American economy can reduce the rate of Indonesian economic growth by 0.05%.

The government through the Ministry of Home Affairs consistently continues to simplify investment regulation, where this policy is expected to provide stimulus to investors to make Indonesia as the country of investment destination. Of course, this policy is reflected by the price of the share where the stock price is a barometer of the company's performance or corporate value, because the value of the company can provide prosperity or profit for the holder. The value of companies formed through the indicator of stock market value is strongly influenced by investment opportunities. Firm value is the perception of investors to companies that are often associated with stocks prices. High stock prices make the firm value also high (Susanti and Restina, 2018). The objective of the investment decision is to gain return.

A high level of profit with low risk will make potential investors interested in investing. Investors certainly expect profit when conducting an investment activity. The expected profit is derived from the extent that the return will be obtained optimally (Putra and Susanti, 2019). In addition to being influenced by internal factors of the company through policies that are subsequently analyzed using the ratio of the company, indirectly return of the stock is also influenced by external factors. The external condition has a great influence on the growth conditions of the Indonesian economy which also affects the return of shares. The external condition is often referred to as the macroeconomics, in accordance with the Arbitration Pricing Theory (APT) stating that the return of securities is not only influenced by the market portfolio due to the assumption that the expectations of securities can be other risk sources. Arbitration Pricing Theory (APT) assumes that profit levels are influenced by various factors in the economy and industry (Widajatun and Susanti, 2018).

At least based on the data released by www.indonesia-investments.com there are ten macroeconomic indicators namely gross domestic product, inflation, government debt, exchange rate, the balance of current transactions, benchmark rates, population, Poverty, unemployment rate, and the country's foreign exchange reserves. Of these, there are at least three main variables that have wider coverage in the Indonesian economy, namely inflation, exchange rate and benchmark interest rate. Private consumption, government expenditure, import and export, as well as investments are affected by these variables. In order for national demand to improve, the balance of these three variables should be the focus of the government. Due to the well-being of national conditions, the company's policy on the purchase of raw materials, price of goods and others will be more stable.

The occurrence of inflation is due to increasing the price of goods in general during ongoing periods. This is also due to several factors related to the market mechanism, namely the increased consumption power of the community, the distribution of goods, and speculation that triggered consumption because of the added liquidity in the market. Historically, Indonesia's inflation rate and volatility were higher than other developing countries. While other emerging economies have an inflation rate of between 3-5 percent per year in the 2005-2014 period, Indonesia has an average annual inflation rate of about 8.5 percent over the same period. Only starting from the year 2015 inflation in Indonesia can be said restrained. In addition to exchange rate inflation is also one of the factors that must be considered, here is a picture of the rupiah exchange rate against the US dollar.

The normalization of monetary policy in the U.S. has brought the impact of capital flows from Emerging Economies (EM), including Indonesia to the US. Consequently, the rupiah weakened from IDR 13,500-an per US dollar until it reached more than IDR 15,000 per US dollar on October 2018. The weakening of the rupiah value in some time is one of the causes due to uncertain market conditions so that the market participants tend to show a decrease in the activity of the money market, causing weaker rupiah. The rupiah exchange rate has the possibility to strengthen and more stable because the macroeconomic condition in the country is better when compared with the global economic conditions. But the exchange rate stability does not materialize, as foreign investors are still releasing shares in the local equities market.

The benchmark interest rate or Bank Indonesia 7 Days Repo Rate is the interest rate set by Bank Indonesia which will further influence on the economy. Lowering the benchmark interest rate is to spur economic growth through better credit growth. This policy is expected to stimulate the purchasing power that will eventually increase consumption in the country. This is what is expected by the government and business actors, because the consumption of society is very influential and contributes to the economy in Indonesia for the government and profitability for business people.

Previously, some research on stock return has already been done by some researchers, as Zaini et al (2018) the result showing simultaneous inflation, interest rates, exchange rate, return on assets, debt ratio against Equity, problematic credit and net interest margin are negatively correlated and have a significant impact on the yield on the stock. Assagaf et al (2019) This study found that macroeconomic variables consisting of inflation rates, interest rates, money supply, and foreign exchange rates, stock returns have a significant effect on companies on the Indonesia Stock Exchange. Laichena and Obwogi (2015) there was a significant relationship between the macroeconomic variables in the study and stock returns in East Africa. Al-Abdallah and ALjarayesh (2017) showed all variable has no significant impact on common stock returns of Amman Stock Exchange, Jordan. Septanti et al (2016) results found in this study are development of macroeconomic variables, financial performance and stock returns four state-owned banks showed positive value. Then, Nisha (2015) findings of a considerable impact of interest rate, gold price, exchange rate and money supply are observed for the stock returns of BSE. As explained by the explanation, as well as to conduct further testing related to stock return and also the value of the company, then researchers feel interested and need to do this research with the title macroeconomic factors and influence on stock return that impact the corporate values.

Research and Methodology

The analysis in econometrics depends heavily on the availability of data. The research uses the panel data type. Panel data is a combination of data time series and data cross section (Widarjono, 2013). The analysis of data in this study uses the help of Eviews 10 program. The estimation method using the data panel can be done through three approaches including: common effect, fixed effect, and random effect. Furthermore, the hypothesis tests used in the study included the coefficient of determination (R²) test, the regression coefficient test together (test F), and the individual regression coefficient test (Test T). The data used is secondary data for all variables of inflation. The exchange rate, interest rate, stock return, and the value of the company with observations from the years 2014 – 2018.

The population in this research is the sector of agriculture because based on the results of the sector's observation, the most severe decline in performance among others. Further sampling is done by the purposive sampling method, so from 22 companies that listings only 15 companies that meet the criteria. The analytical technique to be used in this study is to use a double linear regression analysis technique expanded with a pathway analysis method to obtain a comprehensive picture of the relationship between variables of one variable with other. In regression analysis will be searched respectively regression equations (regression coefficient) and value coefficient of its determination to prove the result and know the effect of independent variables against dependent variables using the equation Substructures 1 and Equation substructures 2. This equation will be used to see how much direct effect changes to an independent variable will affect its dependencies variable. The following is the equation 1 and substructure equation 2, namely:

Equation substructure 1

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon_1 \quad (1)$$

Where α is a constant of the equation, Y is a stock return, $\beta_{1, 2, 3}$ is the coefficient of each of the variables, while the $X_{1, 2, 3}$ is to explain inflation, tuka value, and interest rates, while ϵ_1 is a reflection of Influence of other factors outside the model.

Equation substructure 2

$$Z = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 Y + \epsilon_2 \quad (2)$$

Where α is a constant of the equation, Z represents the company's value, $\beta_{1, 2, 3, 4}$ is the coefficient of each variable, while $X_{1, 2, 3}$ is to explain inflation, tuka value, and interest rate, Y is a stock return, whereas ϵ_2 is a reflection of the influence of other factors outside the model.

Figure 1 show the estimation of path analysis model

Figure 1: Estimation of Path Analysis Model

On the estimate the model of the study is a description of the formulation of hypotheses in this study are as follows:

H1: Inflation has direct influence on the return of shares.

H2: The exchange rate has direct influence on the share return.

H3: Interest rates have direct influence on return of shares.

H4: Return shares have direct influence on the value of the company.

Results and Discussions

The results of testing or data processing through Eviews 10 on models I and II in this study can be seen in Table 1 and Table 2. The next data source will be analyzed consisting of 15 samples of the company for 5 years, namely from period 2014 until the period of year 2018. The estimation of the model parameter of the data panel regression is done against the three types of model specifications, such as Common Effect Model (CEM), Fixed Effect Model (FEM), and Random Effect Model (REM). After conducting the Lagrange Multiplier test (LM), Chow test and Hausman test, then the proper one used for this research is Common Effect Model (CEM) both for Model I and II.

Table 1: Regression Results of Model I

Dependent Variable: RETURN

Method: Panel Least Squares

Date: 03/16/20 Time: 12:52

Sample: 2014 2018

Periods included: 5

Cross-sections included: 15

Total panel (balanced) observations: 75

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.015950	2.641477	2.384614	0.0017
INFLASI	-0.068275	0.076948	-3.887286	0.0079
NILAI_TUKAR	7.640105	2.000182	2.420080	0.0057
SUKU_BUNGA	-0.049875	0.052633	-2.947598	0.0165
R-squared	0.605406	Mean dependent var	-0.002673	
Adjusted R-squared	0.567606	S.D. dependent var	0.519861	
S.E. of regression	0.501981	Akaike info criterion	1.511349	
Sum squared resid	17.89093	Schwarz criterion	1.634949	
Log likelihood	-52.67560	Hannan-Quinn criter.	1.560701	
F-statistic	2.788528	Durbin-Watson stat	1.931048	
Prob(F-statistic)	0.036779			

Table 2: Regression Results of Model II

Dependent Variable: PBV

Method: Panel Least Squares

Date: 03/16/20 Time: 12:50

Sample: 2014 2018

Periods included: 5

Cross-sections included: 15

Total panel (balanced) observations: 75

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	12.10539	42.36839	2.285717	0.0159
INFLATION	-1.266881	1.239754	-2.321881	0.0004
EXCHANGE_RATE	0.001305	0.002918	-3.447247	0.0001
INTEREST_RATE	-0.971365	0.848655	3.144594	0.0003
RETURN	2.972348	1.901578	2.563096	0.0025
R-squared	0.803623	Mean dependent var	6.162706	
Adjusted R-squared	0.763830	S.D. dependent var	9.374359	
S.E. of regression	8.043230	Akaike info criterion	7.071879	
Sum squared resid	4528.549	Schwarz criterion	7.226378	
Log likelihood	-260.1955	Hannan-Quinn criter.	7.133569	
F-statistic	7.630080	Durbin-Watson stat	2.204219	
Prob(F-statistic)	0.000037			

Test results against normality by using Jarque-Berra test (JB test) consisting of model I and model II. Where is model I with return stock as the dependent, while inflation, exchange rate and interest rate as variable independent. In the model II with the value of the company is reflected through PBV as a dependent variable, while inflation, exchange rate, interest rates, and the return of shares as variable independent. The test results on the Model I & II concluded that the distributed data was normal because both models resulted in a probability value greater than 0.05.

The test results of multicollinearity on the model I and II, therefore, that the independent variables have a correlation coefficient value entirely below 0.80, so that thus the two models meet the criteria of not having Multicollinearity. Then, to detect the presence of autocorrelation on the model, the Durbin Watson test. Test results for Model I with sample 15 and 3 independent variables with SIG 0.05 obtained value 1.931048 DW's value on this model is greater than the dU value of 1.7501, so that the model I has no autocorrelation. Model II with sample 15 and 4 independent variables with SIG 0.05 obtained value 2.204219 DW's value on this model is larger than the dU value of 2.0296, so that the model II has no autocorrelation.

The heteroskedastisity test was conducted to test if the regression model occurred a variant inequality of the residual one observation to another observation by using a glejser test. If the value of probability > 0.05 Then there is no heteroskedastisity. Test results on the model I & II indicate that each independent variable does not exist smaller than 0.05 so that it can be concluded that from the Glajser test there is no heteroskedastisity problem.

The test coefficient of determination (R^2) is to know how far the ability of the model in describing variations of the indepen variables. Hence the high value of coefficient of determination (R^2) reflects the ability of the independent variable explaining the better depend variables. The results of the statistic performed show that the R^2 value of the model I is 56.76%, indicating that the ability of independent variables (inflation, exchange rates, and interest rates) in a regression model is able to explain the dependent variable (return share) of 56.76% remaining 43.24% described outside the research model. The R^2 value on model II is 76.38%, indicating that the ability of independent variables (inflation, exchange rates, and interest rates, return) in a regression model is able to explain the dependent variable (PBV) of 76.38% remaining 23.62% described outside the research model.

Test statistic F uses the criteria value significance value F test < 0.05 , it can be concluded that independent variables on the research model jointly affect the dependent variables. The test results on the model I showed the value of F-statistic 2.788528 with a probability of 0.036779, model II also demonstrated the F-statistic 7.630080 with a probability of 0.000037. The probability value of the model I & II < 0.05 , so that it can be deduced in a variable index and interest rates) on the model I influence on the dependent variables (return shares) and collectively the index variables (inflation, exchange rate, interest rate, and return shares) on the model II also have an influence on the dependent variables (PBV). 3.4 Results T-hypothesis test (partial) testing partial or often known as T-Test is conducted to test the presence or absence of free variable influence on variables tied to the magnitude of the P-value with a rate of α 0.05 significance. If the probability of value or significance of < 0.05 or Tcount $> a$. It can be concluded that independent variables have individual adherence to the dependent variables. For model I value of this α 0.05 and degree of freedom by 11 then was held by 2.20099 and model II degree of freedom of 10 is held by 2.22814.

Test results on Model I resulted in the value of the inflation variable (-3.887286), the exchange rate (2.420080), and the interest rate (-2.947598). These results show the value of Tcount the entire variable > 2.20099 , so that a partial variable of inflation, exchange rate, and interest rates have a significant influence on the return of shares. While the tests conducted on the model II resulted in the value of the inflation variable Tcount (-2.321881), the exchange rate (3.447247), the interest rate (-3.144594), and the stock return (2.563096). The results showed Tcount value of the entire variable > 2.22814 that partial inflation variables, exchange rate, interest rates, and stock returns have a significant influence on PBV. A negative Tcount value indicates that the relationship between the independent variable and the dependent is the opposite direction.

Results of Path Analysis Model are illustrated in figure 2.

Figure 2: Result of Path Analysis Model

The results of the analysis show that inflation significantly affects the stock return in the negative direction, this means that if there is an increase in the inflation variable, it will cause a decline to be received or vice versa (See Figure 2). High inflation leads to the ability or purchasing power of products sold by the company to go down, because the society chooses to take over the money you have. The study supported previous research conducted by Taunay (2019), and was different from the Andes, Puspitaningtyas, Prakoso (2017) stating that inflation has no effect on the stock return

The exchange rate in this research significantly affects the stocks returns in a positive direction, which means that if the exchange rate is weakened, it will cause a decline to be received or vice versa. Exchange rate is interpreted as one unit of domestic currency in foreign exchange unit. An investor and a capital market performer are usually very cautious in determining the buy or sell position if the exchange rate position is unstable. The declining Rupiah exchange rate will adversely affect the company's performance, which will also impact the Return on shares. The study supported previous research conducted by Sitanggang and Munthe (2018), and was different from Taunay (2019) stating that the exchange rate had no effect on the stock return.

Interest rates on this study significantly affect the stock returns in the negative direction, this means that if there is an increase in interest rate variables it will cause a decrease in the return that will be received or vice versa. Interest rates are a tool used by Bank Indonesia (BI) for JOURS stable economic growth. The increase in corporate profits usually occurs when the economy grows, when interest rates are lowered and will be able to lead to the increase in the share and return received by investors. The study supported previous research conducted by Hidayat, Setyadi, and Azis, and differs from the Sitanggang and Munthe (2018) stating that interest rates have no effect on stock return.

Stock return in this research significantly affect the corporate value of PBV in a positive direction, this means if the management is able to manage the company well so that there is an increase in the return that will be received by the investor because the price of the rising stock is in the market, the value of the company will also increase and apply otherwise. If return increases, this will be in line with the company's objectives and will also impact the welfare of the owners, so that the equity that the company has will increase, the share price in the market increases which will form the return received by the owner, and then will also impact the increase in corporate value. The study supported previous research conducted by Zaini, Sadalia, Fachrudin (2018) In his research finds that stock returns have an influence on PBV.

Conclusion

Referring to the results of research that has been done in sector agriculture with a long observations from the year 2014 – 2018 listed on the Indonesia Stock Exchange with the title of research macroeconomic factors and influence on stock return that impact the corporate values, the conclusion we find is inflation and interest rates negatively and significantly affect the return of shares. The exchange rate positively and significantly affects the stock return and the influential stock return rate positively and significant to the corporate values. This means that the company in an effort to ensure that the stock return will be accepted by the owner or investor should pay attention to the variable inflation, exchange rate, and interest rates. Because the movements that occur in these three variables are able to affect the return of shares, the entire

company policy should refer to the conditions of the triple variables, then in this case also find the better the company in Increase the amount of return received by investors, then the value of the business that is reflected by PBV will also be better, meaning that the market believes and sees the company in a healthy condition because it is able to provide profit as expected Investors.

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