

Does Macroeconomic Condition Matter for Stock Market? Evidence of Indonesia Stock Market Performance for 21 Years

Satria Aji Setiawan¹
Ministry of Finance - Indonesia

Abstract

The stock markets are becoming an essential and inseparable part of the economies in many countries, including Indonesia. The fact that stock markets indices become one of the indicators to determine the healthiness of country economics showing the importance of the stock market in a country. Whenever the stock market experiences a substantial decline, there is reason to fear that a recession may come. Thus, policymakers and the government have to be aware of this matter. Macroeconomics plays an essential role in economic activities as well as brings an effect to stock market performance. GDP as an indicator of economic growth, inflation that is limiting consumption, interest rate, and exchange rate are selected macroeconomic variables that affect the stock market performance. Using multiple regression analysis, it is known that GDP and inflation contributing to the rise of stock market value, albeit the effect of inflation is not significant. Contrary, interest rate and exchange rate bring a negative impact on the stock market performance, primarily interest rate, which has a significant effect.

Keywords: macroeconomic, GDP, inflation, interest rate, exchange rate, stock market.

¹ Satria Aji Setiawan is a Staff of Ministry of Finance of the Republic of Indonesia. E-mail: satria.as@kemenkeu.go.id

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I. Introduction

1.1. Background

The stock markets are becoming an essential and inseparable part of the economies in many countries, including Indonesia. The fact that stock markets indices become one of the indicators to determine the healthiness of country economics showing the importance of the stock market in a country. Mankiw (2010:264) mentioned that the stock market is reflecting expectations about economic conditions in the future because the stock market is showing the willingness of investors to buy at a high price level when they expect companies to be profitable. The rise in stock prices indicates that investors expect the economy to grow rapidly; a decrease in stock prices suggests that investors expect an economic slowdown. Whenever the stock market experiences a substantial decline, there is reason to fear that a recession may be around the corner (Mankiw, 2010:534). Thus, the government needs to pay attention to measuring the efficiency of the stock market and even interfere if it is necessary.

With the advancement in technology as well as globalization, which creates a borderless world, it is easier for investors to access the stock markets around the world. Nowadays, more and more people invest their money in the stocks listed in Indonesia Stock Exchange (IDX). As a consequence, capital market investment in Indonesia is growing significantly as one of the promising investments. The number of investors in IDX increasing significantly, rising about 30% from the prior year to 1.1 million people.

The performance of capital market represented by its aggregate performance called Indonesia Stock Exchange Composite (IDX Composite). IDX Composite is an index that measures the stock price performance of all listed companies in the Main Board and Development Board of the IDX. Many factors influencing the stock performance of the company, can be from internal or external factors. One of the critical factors from external is the economic factor, which can be represented by many indicators, such as Gross Domestic Product (GDP), inflation, interest rate, and exchange rate.

Gan et al. (2006) were conducting research in New Zealand Stock Market to analyse the effect of 7 macroeconomics variables (inflation rate, short term interest rate, long term interest rate, exchange rate index, money supply, real GDP, and domestic retail oil prices) to the New Zealand Stock Index (NZSE40) return from January 1990 to January 2003. They are using a cointegration test, with specifically employ Johansen Multivariate and Granger-causality test in processing the data. The result shows that the interest rate and real GDP are consistently and significantly determining the NZSE40, while other variables are not.

Another study by Ahmad et al. (2010) observed the impact of interest rate and exchange rate toward the stock return in Pakistan Stock. The dependent variable used in their research is the stock return of KSE-100, and the independent variables are interest rate and exchange rate. The data is collected yearly from the State Bank of Pakistan and Karachi Stock Exchange from 1998 to 2009. As a result of multiple regression model analysis, it shows that the change in the interest rate and the exchange rate has a significant impact on stock returns. The change in interest rate giving a negative impact, while the change in the exchange rate was giving positive to the stock returns.

Gross Domestic Product (GDP) is composed of goods and services produced for sale in the market and also includes some nonmarket production, such as defence or education services provided by the government. GDP is an essential indicator to measure the monetary value of goods and services—that is, those that are bought by the final user—produced in a country in a given period of time, usually a quarter or a year (Callen, 2020). Growth of GDP means that there is development in that country, and it is expected to bring effect to the capital market in that country.

Inflation is simply an increase in the average level of prices, and a price is a rate at which money is exchanged for a good or service. The inflation rate measures how fast prices are rising (Mankiw, 2010:80). The cost of inflation that is easiest to identify arises from the fact that, since the nominal return on high-powered money is fixed at zero, higher inflation causes people to exert more effort to reduce their holdings of high-powered money (Romer, 2015:523). Due to the price of goods and services are increase, purchasing power per unit of money is decreased. High inflation is pressing the purchasing power and reduce the ability to consume goods and services and expected to bring effect to the profitability of companies.

Central banks often change their target interest rates in response to economic activity: raising rates when the economy is overly strong, and lowering rates when the economy is slowing down. The rise in the interest rate reduces the present value of future dividends income, which may depress stock prices. Besides, high-interest rates are also increasing the opportunity cost of borrowing, which may limit investment and economic activities.

The exchange rate is the rate in which one currency will be exchanged for another. The exchange rate also regarded as the value of one country's currency in relation to another currency (O'Sullivan & Sheffrin, 2003:458). There is still no consensus on the relationship between the stock market and exchange rate, although the topic has been widely discussed. Two main theories explain the dynamic interactions between exchange rate and stock market prices. They are flow-oriented model and stock-oriented model. Flow oriented model stated that changes in exchange rates lead to changes in stock price. Meanwhile, stock-oriented model or widely known as portfolio adjustment approach indicated that the stock prices cause changes in exchange rate.

Taking everything into consideration, macroeconomics plays an essential role in economic activities as well as brings an effect to stock market performance.

1.2. Research Question

The research questions answered in this study are:

1. Does GDP growth affect the stock market?
2. Does inflation affect the stock market?
3. Does interest rate affect the stock market?
4. Does exchange rate affect stock market?

1.3. Research Benefit

The findings of this study would bring significant benefits both in the practical and academic fields. By analysing the effect of GDP, inflation, interest rate, and exchange rate, it is expected that this paper will give benefit as below:

1. Policymakers can establish effective evidence-based policy by paying attention to the selected macroeconomics variables (GDP, inflation, interest rate, and exchange rate) to maintain good climate investment in the stock market.

2. The government can determine which macroeconomics variable they should pay attention more or even to interfere in the market in order to establish an efficient stock market.
3. The investor can determine when to enter the stock market and what is their expected stock return given the existing macroeconomics condition (GDP, inflation, interest rate, and exchange rate).
4. Enriching the existing literature about the effects of macroeconomics variables on stock market, thus academics can investigate further evidence in this field.

II. Literature Review

2.1. Prior Research

2.1.1. GDP

GDP is the value of the goods and services produced by the nation's economy, less the value of the goods and services used up in production. GDP is also equal to the sum of personal consumption expenditures, gross private domestic investment, net exports of goods and services, and government consumption expenditures and gross investment (Dyanan & Sheiner, 2018). There are two kinds of GDP; they are nominal GDP and real GDP. Nominal GDP is the value of goods and services measured at current prices, so it can increase either because prices rise or because quantities rise. Real GDP is the value of goods and services measured using a constant set of prices (Mankiw, 2010:24).

GDP is widely accepted, and the growth of GDP is regarded as a sign of economic growth. Economic growth is a series of activities sourced from human beings, capital accumulation, and usage of modern technology (Setiawan, 2018). There are two ways to view GDP as an economic indicator. One way to view GDP is as the total income of everyone in the economy. Another way to view GDP is as the total expenditure on the economy's output of goods and services. From either viewpoint, it is clear why GDP is a gauge of economic performance (Mankiw, 2010:18). It is widely believed that the growth of the economy is good for stock market performance, and economic growth forecasts are a base of asset allocation decisions. Investing in markets with good long-term growth prospects is widely viewed as more attractive than investing in countries with prolonged periods of low growth that are expected to persist.

The correlation between economic growth and the stock market is a recurring question amongst investors and analysts. While many scholars claim that theoretically both figures should be the same, others believe that there is no correlation at all. The results of the studies somewhat conflicted, depend upon the geographical areas and term of the study. Study by Reddy (2012) shows that there is significantly positive relationship between GDP and stock market performance. A similar analysis in Amman Stock Exchange shows that there is strong relationship between GDP and stock market return and the movement of prices in the Amman Stock Exchange is affected by the movement of GDP (Abedallat & Shahib, 2012).

The study by Dimson et al. (2002) has examined whether countries with high GDP growth in the long period also had superior stock market performance in a long period. The result was surprising and contrary to expectations that the correlation between stock returns and economic growth across countries can be negative. The study was taken in 19 major countries between 1900 and 2001 and shows that the correlation between the real compound rate of return on equities and the compound growth rate of real GDP is minus 0.39. This negative correlation suggests that investors in 1900 would have been better off investing in the companies of countries that ended up experiencing lower growth GDP rather than investing in those countries that enjoyed higher GDP growth rates.

Similar analysis by Ritter (2005) shows that over the 1900–2002 period for 90% of world market capitalization in 1900, there is a negative correlation between GDP growth and real equity returns. Over long periods of time, the cross-country correlation of GDP growth and real stock returns has been negative. This pattern has been true for both developed countries and emerging markets, and whether returns are measured in local currencies or U.S. dollars. (Ritter, 2012).

Much of the study of this apparent paradox has centered on the fact that investors routinely appear to overpay for growth. An expectation of strong future economic growth encourages investors to stampede into a market, pushing stock valuations too high and ushering in an almost inevitable correction. Siegel (1998) explains that the cause of the lack of observable correlation between GDP growth and stock returns is that expected economic growth is already impounded into the prices, thus lowering future returns.

2.1.2. Inflation Rate

Inflation is one of the biggest concerns both for investors or governments. Inflation is an increase in the average price of goods and services in terms of money (Romer, 2012:514). The inflation rate measures the percentage change in the average level of prices from the year before. When the inflation rate is above zero, prices are rising. When it is below zero, prices are falling. If the inflation rate declines but remains positive, prices are rising but at a slower pace (Mankiw, 2010:6). The increasing price of goods and services reduces the purchasing power each unit of currency can buy. Rising inflation significantly might bring hazardous effect input prices to become higher that somehow worrisome to companies, consumers tend to purchase fewer goods, then revenues and profits of companies usually decline.

Many studies have examined the impact of inflation on stock returns. Unfortunately, the results are somehow conflicting when several factors are taken into account, for instance, different in geographical area and length of time. Theory as manifested by Fisher (1930) in Li et al. (2010), commonly known as the Fisherian theory of interest, suggests that the nominal expected return on any asset is composed of the expected real interest rate and the expected inflation rate. Mishkin and Simon (1995), was held research in Australia and found that the Fisher effect holds for interest rates in the long run but not in the short term in Australia. Another study by Gultekin (1983), using quarterly data from 1947 to 1979, found that a one per cent rise in inflation in Australia reduces nominal returns by 0.46 per cent. This negative relationship is the rule rather than the exception.

Li et al. (2010) examine the relationship between the inflation rate and stock returns for the UK aggregate stock market as well as for ten different industries. They find that unexpected inflation announcements negatively affect stock returns, while expected inflation has minimal impact on the announcement study. A positive relationship between expected inflation and stock returns and a negative correlation between unexpected inflation and stock returns are found in the medium-term study. Research by Luintel and Paudyal (2006) in the UK find that pairs of stock indexes and inflation as represented in Retail Price Index (RPI) are cointegrated, which implies a positive long-run relationship between them.

2.1.3. Interest Rate

There are two kinds of interest rates. They are the nominal interest rate and the real interest rate. The nominal interest rate is the interest rate as usually announced by Central Bank, while the real interest rate is the nominal interest rate corrected for the effects of inflation (Mankiw, 2010:63). Interest rate changes can have a positive and negative impact on the stock markets.

The relation between interest rate fluctuations and common stock returns has been the focus of a considerable amount of research. Empirical research has found that the inclusion of an interest rate factor adds substantial explanatory power to the simple single-factor market model, where the return on an index of common stocks is used as a proxy of the market portfolio. Zhou (1996) conduct the study of the relationship between interest rates and stock prices. The research using regression analysis and found that interest rates have an important impact on stock returns, especially on long-term perspective.

Another research conducted by Lee (1997) using three-year rolling regressions to analyse the relationship between the stock market and the short-term interest rate. He tried to forecast excess returns on the Standard and Poor 500 (S&P 500) index with the interest rate but found that the relationship is changing over time. The relationships varied, changes from a significantly negative to no relationship, or even a positive although the relationship is not significant. In their study, Liu and Shrestha (2008) examine the long-run relationship between the interest rate and stock indices in China employing heteroscedastic cointegration analysis and finds that the long-term relationship does exist between the stock market and interest rates. Another research by Bohl et al. (2003) investigates the relationship between stock returns and short-term interest rates using the data from Germany over the period 1985 to 1998. They find a positive but insignificant relationship between German stock returns and short-term interest rates at both daily and monthly frequencies.

2.1.4. Exchange Rate

There is considerable academic literature examining linkages between stock and foreign exchange markets. The results are somewhat mixed as to the significance and the direction of influences between stock prices and exchange rates. The upward and downward exchange rate movements may determine the stock prices of the firms. The differences in the relationship between the exchange rate and the direction of stock prices can be explained by the traditional approach and portfolio balance model. The traditional approach stated that the relationship between exchange rates and stock price is positive, in which changes in exchange rates affect the company's competitiveness. However, in the portfolio balance model, the relationship between exchange rates and stock price is negative, since the interaction between the stock market and the money market is very fast.

The study by Suriani et al. (2015) suggested that a positive relationship between stock prices and exchange rates exists when local currency depreciates and local firms become more competitive, which leads to an increase in their exports. This event will result in an ultimate rise in stock prices. In their study, Yau and Nieh (2008) note that although the existence of a relationship is often signified by the researchers between the stock exchange returns and the exchange rates, the length and the direction of the relationship is often an element of further debate. Interestingly, using Granger causality and the relationship between the financial assets and exchange rates of the USA and Japan, there is no short-term causal relationship between the two; however, in the long run, a positive relationship has been found to exist.

Kim (2003) uses the error correction technique and the cointegrating system to investigate whether a long-term relationship exists between the exchange rates and stock prices in the United States. The data set used the S&P 500, which yields that there is a negative relationship that exists for the stock returns in the USA with the value of the dollar. Yaya and Shittu (2010) examined the impact of inflation and the exchange rate on stock market volatility in Nigeria. They were using monthly series data from 1991 to 2008 and applied Generalized Autoregressive Conditional Heteroscedasticity (GARCH) and Quadratic GARCH models in the analysis. Their analysis proved that inflation and exchange rates exert a significant influence on stock market volatility.

2.2. Hypothesis

Based on the literature review, the hypothesis for this research is formulated below:

H₁: GDP has an impact on the stock market.

H₂: Inflation has an impact on the stock market.

H₃: Interest rate has an impact on the stock market.

H₄: Exchange rate has an impact on the stock market.

III. Research Methods

3.1. Operational Definition

The stock market performance in Indonesia can be measured by the indices. There are many classifications of the index, for instance, based on sectoral, institution, and environmental. In this study, the index was used is IDX Composite because it represents all public listed companies in IDX. IDX Composite is an index that measures the stock price performance of all listed companies in the Main Board and Development Board of the Indonesia Stock Exchange. IDX Composite on this study was taken from the closing index on the last trading day at the end of each year from 1999 to 2019. All data are available on the official website of IDX.

GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or depletion and degradation of natural resources. GDP is essential to showing economic activities and represent the growth of the economy in the country. The data in this study were using real GDP, which is the actual increase in GDP and comes not from the rise of price in the country. Real GDP in Indonesia usually called as GDP of constant price. The data of GDP of constant price from 1999 to 2009 were taken from World Bank official website.

Inflation is understood as a persistent, ongoing rise across a broad spectrum of prices. Inflation as measured by the consumer price index reflects the annual percentage change in the cost to the average consumer of acquiring a basket of goods and services that may be fixed or changed at specified intervals, such as yearly. Yearly data of inflation were taken from World Bank official website.

The interest rate used in this study is the nominal interest rate or the interest rate without calculating the effect of inflation on it. The interest rate is the policy rate reflecting the monetary policy stance adopted by the Bank of Indonesia and announced to the public by the Board of Governors of Bank of Indonesia in each monthly Board of Governors Meeting. Interest rate data were taken yearly from 1999 to 2019 from the Bank of Indonesia. The interest rate from 2005 to 2016 was obtained from BI rate, while data from August 2016 to December 2019 were taken from BI 7-day (Reverse) Repo Rate.

The official exchange rate refers to the exchange rate determined by national authorities or to the rate determined in the legally sanctioned exchange market. It is calculated as an annual average based on monthly averages (local currency units relative to the U.S. dollar). The data are taken from the last day of each year and were obtained from the World Bank official website.

3.2. Variables and Data

In this study, there are four independent variables and one dependent variable. The independent variables are GDP, inflation, interest rate, and exchange rate. The dependent variable is the stock market performance, as reflected in IDX Composite. All data are secondary data and were obtained from the website of the official institution in Indonesia, for instance, IDX, Bank of Indonesia, and Indonesia Statistics Agency.

3.3. Statistical Model

This study is aiming to determine the effect of GDP, inflation, interest rate, and exchange rate on the stock price. Based on the hypothesis as mentioned above, the general model below is formulated to illustrate the relationship between variables.

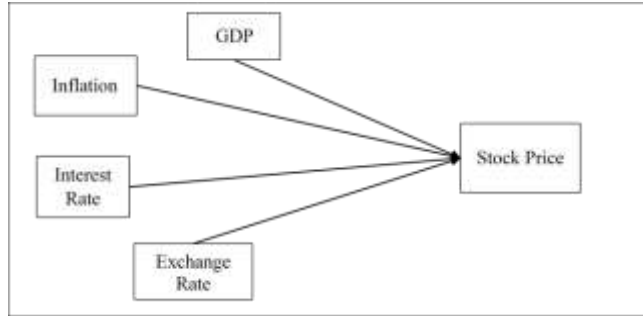


Figure 1. Relationship among Variables

To examine the effect of GDP, inflation, interest rate, and exchange rate toward stock market, multiple regression was deployed. However, multiple regression analysis can be done if situations like multicollinearity, heteroscedasticity, and autocorrelation do not occur. Hence, the classical assumption test, such as normality, multicollinearity test, heteroscedasticity test, and autocorrelation test were conducted in advance. The model considered a good model if it meets the BLUE (Best Linear Unlimited Estimator) criteria. BLUE can be achieved if it meets the classical assumptions.

The purpose of normality test is to determine if data is normally distributed or not. Multicollinearity aim is to see whether there is a correlation among independent variables in the regression model or not. Heteroscedasticity test was conducted to know if there is an inequality of variance from the residual of one observation to another observation in the regression model. Autocorrelation test was done to check the existence of autocorrelation.

To examine the effect of GDP, inflation, interest rate, and exchange rate toward stock market, multiple regression was deployed. The multiple regression method is aiming to show the effect of independent variables on the dependent variables. It can be written as below:

$$Y_R = \alpha + \beta_1 X_{GDP} + \beta_2 X_{INF} + \beta_3 X_{IR} + \beta_4 X_{ER} + \varepsilon \tag{1}$$

In the model above, the stock price is the dependent variable (Y_R), while GDP (X_{GDP}), inflation (X_{INF}), interest rate (X_{IR}), and exchange rate (X_{ER}) are the independent variables in this research.

3.4. Hypothesis Testing

The hypothesis was tested by using a T-test in order to know the impact of independent variables on the dependent variable partially by assuming the other independent variables are constant. This test is used to determine whether, in the regression model, the independent variable partially has a significant effect on the dependent variable.

Meanwhile, the regression model was tested using F-test. F-test was conducted to know the impact of all independent variables available simultaneously on the dependent variable. The F-test draws a hypothesis conclusion after comparing the calculated F value

and the value on the F table. By this test, the significant impact of GDP, inflation, interest rate, and exchange rate simultaneously on IDX could be found. Given the data as aforementioned, there are 21 observations. The writer wants to be confident of the result significance level is $\alpha = 5\%$, which provides strong evidence of the result.

IV. Discussions

The research data has been successfully collected for 21 years, from 1999 to 2019 from the related institution. Before running the regression, the classical assumption test was conducted. Classical assumption test consists of a normality test, heteroscedasticity test, autocorrelation test, and multicollinearity test. It was done by processing all data using Eviews 9 application.

4.1. Classical Assumption Test

4.1.1. Normality Test

A normality test is used to determine whether sample data has been drawn from a normally distributed population. It is beneficial to ensure that the inferences that have been made on global and individual hypotheses tests are valid. Ideally, the residuals should follow a normal probability distribution. Using the software, the normality test can be seen below.

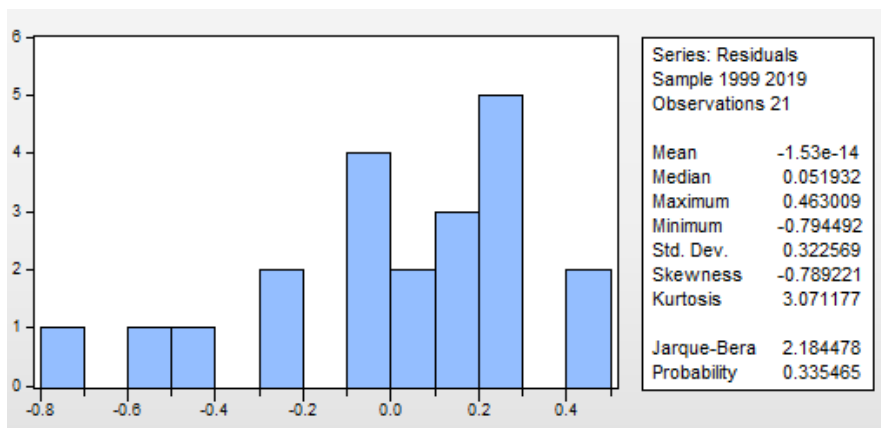


Figure 2. Normality Test on Eviews 9

Using Jarque-Bera method, the probability is 0.335465. Compare to the significance level at 0.05, then the data is normally distributed because of probability higher than α .

4.1.2. Heteroscedasticity Test

Heteroskedasticity Test: Glejser

| | | | |
|---------------------|----------|---------------------|--------|
| F-statistic | 0.959547 | Prob. F(4,16) | 0.4562 |
| Obs*R-squared | 4.062969 | Prob. Chi-Square(4) | 0.3976 |
| Scaled explained SS | 3.092065 | Prob. Chi-Square(4) | 0.5425 |

Figure 3. Heteroscedasticity Test on Eviews 9

In order to decide the existence of heteroscedasticity, then Probability F or Probability Chi-Square compared to α . Because they are greater than α , then heteroscedasticity is not happen.

4.1.3. Autocorrelation Test

Breusch-Godfrey Serial Correlation LM Test:

| | | | |
|---------------|----------|---------------------|--------|
| F-statistic | 0.679299 | Prob. F(2,14) | 0.5229 |
| Obs*R-squared | 1.857628 | Prob. Chi-Square(2) | 0.3950 |

Figure 4. Autocorrelation Test on Eviews 9

The test using Breusch-Godfrey LM Test and show that Probability Chi-Square greater than α showing there is no autocorrelation.

4.1.4. Multicollinearity Test

Multicollinearity exists when independent variables are correlated. Correlated independent variables make it difficult to make inferences about the individual regression coefficients and their individual effects on the dependent variable.

| Variable | Coefficient Variance | Uncentered VIF | Centered VIF |
|----------|----------------------|----------------|--------------|
| C | 340.9837 | 55055.14 | NA |
| GDP | 0.413133 | 88532.94 | 8.458311 |
| INF | 0.054038 | 31.93865 | 2.248446 |
| IR | 0.191194 | 137.7169 | 4.347120 |
| ER | 0.780365 | 10753.75 | 4.084376 |

Figure 5. Multicollinearity Test on Eviews 9

The test was conducted using Variance Inflation Factors (VIF) and can be seen that all centered VIF are below 10. Thus, there is no multicollinearity.

4.2. Multiple Regression

After meeting all classical assumptions, then the data were processed using multiple regression. The result can be seen below.

Dependent Variable: IDX_COMPOSITE
 Method: Least Squares
 Date: 04/05/20 Time: 03:14
 Sample: 1 21
 Included observations: 21

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|--------------------|-------------|-----------------------|-------------|----------|
| GDP | 2.029867 | 0.642754 | 3.158076 | 0.0061 |
| INF | 0.274229 | 0.232461 | 1.179680 | 0.2554 |
| IR | -1.084824 | 0.437257 | -2.480977 | 0.0246 |
| ER | -0.587561 | 0.883382 | -0.665127 | 0.5154 |
| C | -59.12613 | 18.46574 | -3.201936 | 0.0056 |
| R-squared | 0.892351 | Mean dependent var | | 7.645040 |
| Adjusted R-squared | 0.865439 | S.D. dependent var | | 0.983145 |
| S.E. of regression | 0.360643 | Akaike info criterion | | 1.002400 |
| Sum squared resid | 2.081014 | Schwarz criterion | | 1.251096 |
| Log likelihood | -5.525205 | Hannan-Quinn criter. | | 1.056374 |
| F-statistic | 33.15782 | Durbin-Watson stat | | 1.326334 |
| Prob(F-statistic) | 0.000000 | | | |

Figure 6. Regression on Eviews 9

R-squared indicates the percentage of the variance in the dependent variable that the independent variables explain collectively. R-squared measures the strength of the relationship between the model and the dependent variable. Figure 6 shows that the model able to explains 89.23% of the total population.

F-test showing that GDP, inflation, interest rate, and exchange rate influence IDX Composite simultaneously. T-test is a type of inferential statistic used to determine if there is a significant difference between the means of two groups, which may be related to certain features. The t-test tells how significant the differences between groups are. The data show that GDP and interest rates affect IDX Composite significantly because of their p-value greater than those significance level. Whereas inflation and exchange rate do not significantly affect IDX Composite.

Hold inflation, interest rate, and exchange rate constant, 1% increase in GDP will increasing 1.03% of IDX Composite significantly. Hold GDP, interest rate, and exchange rate constant, 1% increase in inflation will affect 0.27% of IDX Composite not significantly. Hold other variables constant, a rise in interest rate will decrease IDX Composite for -1.08% significantly. Hold other variables constant, rise 1% in exchange rate will decrease IDX Composite for 0.58% at no significant.

V. Conclusion and Recommendation

5.1. Conclusion

Macroeconomic variables have various effect to stock market in Indonesia, can be positive or negative, significant or insignificant. The result shows that there is a significant positive relationship between the GDP and stock market. Every 1% rise in GDP will bring positive effect to IDX Composite as 1.03%. This is somewhat conflicted with the resulting form Ritter (2005;2012) that mentioned if GDP affects the stock market negatively. The interest rate stipulated by Bank Indonesia also has a significant effect on stock market. One percent increase in interest rate will decrease by 1.08% of the stock market. This is in line with the research from Zhou (1996) as well as Liu and Shrestha (2008). Due to the significant effect of those variables to stock market, we have to put more concern on them before entering the market or before making the regulation about it.

Every 1% rise in inflation will increase IDX Composite for 0.27%. This result similar to research by Gultekin (1983) but different from the study by Luintel and Paudyal (2006). Geographical and timeframe might be a crucial factor that distinguished these results. If the exchange rate weakens for 1%, then stock market will be weakened 0.58% of stock market. However, the effect of those two variables is insignificant.

5.2. Recommendation

Based on the elaboration as mentioned above, the writer recommends:

1. In order to establish good climate investment in the stock market and maintain an efficient market, policymakers have to put consider more on macroeconomic variables, especially GDP and interest rates. Bank of Indonesia has to rethink whenever they want to decide to change the interest rate, because it might bring negative effect to stock market.
2. Government has to monitor and give stimulus so that economic growth can be achieved as targeted. It is because GDP growth plays a significant role in stock market performance.
3. The investor can determine when to enter the stock market and what is their expected stock return by paying attention more, especially on GDP and interest rate.

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