



## MICRO MACRO ECONOMICS FUNDAMENTAL FACTORS AND INDONESIA STOCK EXCHANGE RETURN

**Rizaldi Yusfiarto**

Islamic State University of Sunan Kalijaga, Yogyakarta

rizaldi.yusfiarto@uin-suka.ac.id

### ABSTRACT

*Stock investment has an attraction for investors because, with investments in the form of shares, investors have the expectation of obtaining profits in the form of capital gains or stock dividends. To take into account the risk factors and produce a maximum level of profit, the stock purchase decision-making process requires careful analysis when determining its market value. Thus, in deciding investment in the stock market, prospective investors must first conduct an in-depth analysis of the company whose shares will be purchased. The fundamental analysis concerns the projected condition of the company in the future by showing the present and past situations. This approach is used to assess the intrinsic value of these shares, and investors are used for investment over a long period. The data used in this research are 22 infrastructure issuers on the Indonesia Stock Exchange from 2015-2018. The data is then processed by the econometrics method using Eviews and Microsoft Excel software with a panel data regression model or pooled regression. Hypothesis testing shows that fundamental macro-micro factors jointly affect the stock returns on infrastructure companies listed on the Indonesia Stock Exchange.*

***Keywords: Interest Rate, Return On Assets (ROA), Earning Per Share (EPS), Inflation***

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## **INTRODUCTION**

Companies need funds to finance and develop their projects that can indirectly increase the country's economic activities and prosperity for the people (State, 2015). Meanwhile, an investor who has excess funds can choose investment alternatives that provide the most optimal return. Stock investment has an attraction for investors because, with investments in the form of shares, investors have the expectation of obtaining profits in the form of capital gains or stock dividends (Hussin et al., 2013). Market trading is developing, as indicated by the increased participation of domestic and foreign investors listed on the Indonesia Stock Exchange (Strategy, 2012). In 2013 transactions per day reached 161.9 thousand, an increase compared to 2009, which only reached 87 thousand transactions every day axiomatically, the greater the expected return of an investment will be accompanied by greater risks, and vice versa (Simbolon & Purwanto, 2018). To take into account the risk factors and produce a maximum level of profit, the stock purchase decision-making process requires careful analysis when determining its market value (Sivaramakrishnan et al., 2017). Thus, in deciding investment in the stock market, prospective investors must first conduct an in-depth analysis of the company whose shares will be purchased. The first analysis to do is Fundamental Analysis. The fundamental analysis concerns the projected condition of the company in the future by showing the present and past conditions. This approach is used to assess the intrinsic value of these shares, and investors are used for investment with a long period of time (Anwar et al., 2018; BenMabrouk, 2018).

Fundamental Analysis (and Technical Analysis) are the two sciences that are the main concern of prospective and stock investors because the nature of buying shares of a company is to have a company even though within the proportional limit of the number of shares purchased (Schellhorn & Sharma, 2013). Uncertainty of future cash flows on investment in the capital market is influenced by many factors forming investment risk, both systematic and non-systematic risk. Both of these risks will affect the level of return expected by investors (Johnson & Templar, 2011). The non-systematic risk from one company does not correlate with other companies. Conversely, systematic risk will correlate to each company and have direct implications on the movement of stock prices in general, which is systematically reflected in the movement of the composite price index (Auliyah & dan Hamzah, 2006). Systematic risk, known as market risk, is formed by macro factors that are uncontrollable so that it cannot be controlled, such as various government policies, social stability, politics, national security, and macro conditions such as inflation and interest rates. In this study, the fundamental macro approach used is the inflation rate and interest rate (SBI) (Chen & Yuan, 2007; Fujiki, 2019; Musthafa, 2017). Inflation is a risk factor that must be considered in the investment process. An increase in prices, in general, will have an impact on

They reduced purchasing power. As a result, if the share price decreases, the value of the company also decreases. On the other hand, fluctuations in interest rates are also a factor that determines the level of purchasing power of the people (Guru & Yadav, 2019; Muange & Maru, 2015). The interest rate affects consumption growth through savings. High-interest rates will encourage people to consume in the opposite direction because high-interest rates will make more and more people choose financial assets in the form of time deposits or bonds and shift their stock portfolios (Duarte & Sarkar, 2011; Kuwornu, 2012). In addition to fundamental macro factors, stock returns are also influenced by fundamental micro factors. Micro fundamental factors can be grouped into company policy factors, and company performance factors related to company conditions are generally indicated in financial statements that reflect financial performance a company (Kurihara, 2012). Based on financial statements can be known as financial ratios, cash flow, and other performance measures associated with stock returns. Therefore, the publication of the company's financial statements (issuers) is the time awaited by investors in the capital market because of the publication of the financial statements investors can find out the development of the issuer, which is used as a consideration to buy or sell shares owned. Past studies have shown the importance of the company's annual financial statements as a source for investment (Cheng et al., 2019; Young Park & Wook Kim, 2010).

Based on the explanation above, the purpose of this study in general, is to examine the effect of fundamental macroeconomic and microeconomic factors on stock returns listed on the Indonesian stock exchange. specifically the purpose of the study was to examine the effect of inflation, SBI interest rates, EPS and ROA on stock returns on infrastructure companies listed on the Indonesia Stock Exchange

## **LITERATURE REVIEW**

### **Stock Return Concept**

Return on investment in shares consists of dividends and capital gains. Dividends represent the distribution of corporate income to shareholders, both in the form of cash dividends and stock dividends. At the same time, capital gains are the difference between the purchase price and the selling price of shares of an investment instrument (Adningtyas, 2018; Yudianto & Muharam, 2018; Zhang & Wu, 2018). The expected return is the rate of return that investors anticipate in the future. In comparison, the return that occurs is the rate of return that has been obtained in the past. Between the expected level of return and the return that occurs or the actual return is a risk that must be considered in the investment process (Wilkins et al., 2006).

The concept of return is divided into two groups, namely a single return and portfolio return (Lin et al., 2010). A single return is the result obtained from an investment in the form of realized returns and expected returns. Realized returns are realized returns that are calculated based on historical data and function as a measure of company performance. Historical returns are also useful as a basis for determining future expected returns. The expected return is the return expected by investors in the future (El-Sayed Ebaid, 2009; Ivanisevic Hernaus, 2019; Wilkens et al., 2006).

### **Inflation**

Inflation is a fundamental macro factor of macroeconomic indicators that illustrates an unhealthy economic condition because the prices of goods in general increase so that it weakens people's purchasing power (Aisiyah, 2013; Hosseini et al., 2011; Simbolon & Purwanto, 2018). The price of goods will always experience a change, usually in the form of an increase. But if the increase only occurs for one or two items, it cannot be called inflation (Payne, 2008). Changes in the form of rising prices of goods in general and take place continuously, in economic terms is called inflation (Montes & Nicolay, 2015; Schnabel, 2011). Thus it can be concluded that inflation is an indicator that shows the tendency of rising prices generally accepted in an economy. The level of inflation can affect the level of purchasing power of the people which leads to a decrease in public consumption, which has an impact on the real sector and the real interest rate that is often a reference in investment, so that it will affect the motivation or interest of investment to reduce and will reduce the level of real income that investors get from their investment (Doh-Khul Kim & Sung Chul No, 2013; Guru & Yadav, 2019; Wu, 2012).

### **Interest rate**

The interest rate states the rate of repayment of the loan or other investment, above the repayment agreement, which is expressed as an annual percentage (Musthafa, 2017). Interest rates describe the economic conditions of a country, meaning that the better the economy of a country, the lower the interest rate. If deposit rates are high, then investors will tend to like to place their funds in deposits, especially deposits are risk-free financial instruments (Hsing, 2008; Kuwornu, 2012; Law & Ibrahim, 2014). Conversely, if deposit rates are low, investors will likely invest their funds in shares. On the other hand, fluctuations in interest rates that occur are factors that determine the level of purchasing power. Interest rates affect company profits in two ways (Wilkens et al., 2006): a. Because interest is a cost, the higher the interest rate, the lower the company's profit if other things remain constant; b. Interest rates affect the level of economic activity that affects corporate profits

## **Return on Assets**

Return on Assets (ROA) is the ratio between profit after tax to total assets. ROA reflects the company's ability to obtain net profit after tax from the total assets used for the company's operations (Rashid, 2011). The company always strives to improve Return on Assets (ROA), this ratio measures how much net income can be obtained from all assets owned and invested into a company (asset efficiency) (El-Sayed Ebaid, 2009). The company's ability to manage assets to make profits has an appeal and is able to influence investors to buy the company's shares. Increased Return on Assets (ROA) will add to the attractiveness of investors to invest their funds in the company (Wilkins et al., 2006). So that the company's stock price will increase; in other words, Return On Assets (ROA) will have a positive impact on stock returns.

## **Earning Per Share (EPS)**

The second micro fundamental factor indicator is Earning Per Share (EPS) or earnings per share is the difference between the number of earnings after tax (EAT) and the number of shares outstanding (Beigi et al., 2016). Earning Per Share (EPS) is a ratio that describes the level of profit obtained by shareholders, where the level of earnings (per share) shows the company's performance, especially from the ability of earnings associated with the market (Prasetyo Supadi & Amin, 2017). Earning Per Share is one of the market ratios that basically measures management's ability to create market value that exceeds investment spending. Risks can be avoided by choosing stocks that are fundamentally healthy companies; for example, Earning Per Share continues to grow with high numbers (Grey et al., 2013). The most important yardstick of a company's performance is earnings per share. If the value of Earning Per Share (EPS) continues to increase, it means that the company's performance has improved. This is indicated by the high Earning Per Share (EPS) growth from year to year (Altaf, 2016; Beigi et al., 2016).

## **Research Framework**

Based on the literature review that has been stated previously, the hypothesis tested in this study is:

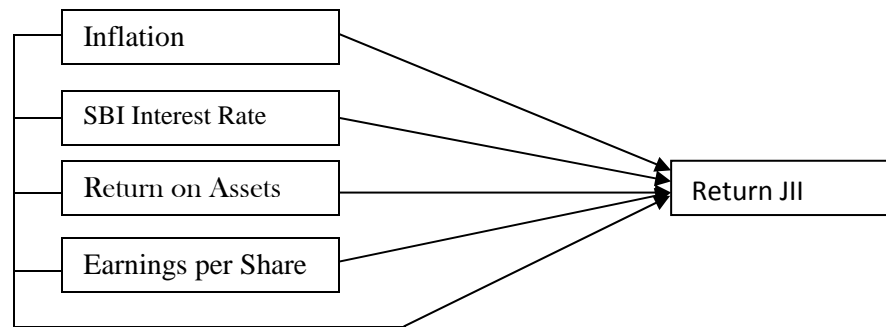
*H1*: Inflation rate, SBI interest rates, ROA, EPS jointly (simultaneously) affect on stock returns.

*H2*: The inflation rate has an individual (partial) negative effect on stock returns.

*H3*: SBI interest rates has an individual (partial) negative effect on stock returns.

*H4*: ROA has a positive (partial) effect on stock returns.

*H5*: EPS has a positive (partial) positive effect on stock returns.



Source: Data processed (2019)

Figure 1  
Research Framework

## METHODOLOGY

The data used in this research are 22 infrastructure issuers on the Indonesia Stock Exchange from 2015-2018. The data is then processed by the econometrics method using Eviews and SPSS software with a panel data regression model or pooled regression. The independent variables used in this study are Inflation Rate, SBI Interest Rate, Return On Assets (ROA), Earning Per Share (EPS). Before conducting the regression test, classical assumptions are tested, namely normality, multicollinearity, autocorrelation, and heteroskedasticity. Following are the specifications of the econometrics model for this research:

$$r_{it} = \alpha_{it} + \beta_1 \text{INFLATION}_{it} + \beta_2 \text{INTEREST RATE SBI}_{it} + \beta_3 \text{ROA}_{it} + \beta_4 \text{EPS}_{it} + \epsilon_{it}$$

- $r_{it}$  = Stock Return
- $\alpha_{it}$  = Constanta
- $\beta_1 - \beta_4$  = Regression line coefficient
- $X_1$  = Inflation
- $X_2$  = Interest Rate SBI
- $X_3$  = Return On Assets (ROA)
- $X_4$  = Earning PerShare (EPS)
- $e$  = epsilon (error term)

## RESULT

The results of formal tests in 2015-2018 data show that the model experiences heteroscedasticity. Because the prob value is greater than  $\alpha = 5\%$  (see table 1), it can be concluded that  $H_0$  is rejected, which is heteroscedasticity in the regression model. Which means there is heteroscedasticity in the regression model, to detect the presence of autocorrelation symptoms, a Durbin-Watson

statistical test was performed (see table 2).

Table 1  
Heteroscedasticity Test Result

Heteroscedasticity Test			
F-Statistic	3.347824	Prob F	0.0005
Obs*R-squared	30.84231	Prob Chi-square	0.0032
Scale explained ss	86.15271	Prob Chi-square	0.0000

Source: Output Eviews, 2019

Table 2  
Autocorrelation Testing Result

Weight Statistics			
R-squared	0.942351	Mean dependent var	4234.584
Adjusted R-squared	0.903747	S.D. dependent var	5723.054
S.E. of regression	1982.469	Sum squared resid	2.56E+08
Prob (F-statistic)	0.000000	Durbin-Watson stat	2.381807
Unweight Statistics			
R-squared	0.932352	Mean dependent var	4523.823
Sum squared resid	5.64E+08	Durbin-Watson stat	2.455213

Source: Output Eviews, 2019

The panel data selection approach is made through the Chow Test and Hausman Test. From the fixed effect test results, it is known that P-Value  $< \alpha$ , then  $H_0$  is accepted, so the estimation method used is fixed effect, If the P-Value  $< \alpha$  ( $\alpha = 5\%$  or  $0.05$ ) then reject  $H_0$  and  $H_1$  is accepted. In Hausmann test calculations that have been done, it can be seen that the probability value in the cross-section random effect test shows a value of 0.0003, which means significant with a significant level of 95% ( $\alpha = 5\%$ ) and using the Chi-Square distribution. So the decision taken in the Hausman test is the starting  $H_0$  (p-value  $< 0.05$ ). Based on the results of the Hausman test (see table 3), the preferred method used in the study is the fixed effect method.

Table 3  
Fixed Effect and Hausman Test Result

Test cross-section fixed effects			
Effects Test	Statistic	df	Prob
Cross-section F	14.335281	(22.32)	0.0000
Cross section Chi-square	151.11524	22	0.0000
Correlated Random Effects – Hausman Test			
Test Summary	Chi-Sq. Statistic	Chi-Sq, df.	Prob
Cross-section random	16.538253	3	0.0003

Source: Output Eviews, 2019

Based on the output can be interpreted, the coefficient of determination (R<sup>2</sup>) of 0.930701 means that 93% of the changes that occur in an increase in stock returns can be explained by changes that occur in the inflation rate, interest rates SBI, ROA, EPS. At the same time, the remaining 7% is explained by other variable factors not included in this research model. The inflation variable regression coefficient (X1) was 562.4213, meaning that if other independent variables have a fixed value and inflation has increased 1%, then stock returns (Y ') will experience an increase of Rp.562.4213. A positive coefficient means that there is a positive relationship between inflation with stock returns, the more the rising inflation, the more increasing stock returns. SBI variable regression coefficient (X2) of - 123.6476, meaning that if other independent variables have a fixed value and SBI has increased 1%, then stock returns (Y ') will decrease by Rp.123.6476. Negative coefficient means that there is a negative relationship between SBI and stock return, the higher the SBI, the lower stock return ROA variable regression coefficient (X3) of -22.43230; meaning that if other independent variables have a fixed value and ROA has increased 1%, then stock returns (Y ') will decrease by Rp. 22.43230. Negative coefficient means that there is a negative relationship between ROA and stock return; the higher the ROA, the lower the stock return. EPS variable regression coefficient (X4) of 3.452135; meaning that if other independent variables have a fixed value and EPS has increased 1%, then stock returns (Y) will experience an increase of Rp.3.452135. The positive coefficient means that there is a positive relationship between EPS and stock returns; the more EPS increases, the more returns.

## CONCLUSION

Based on the results of hypothesis testing shows that the inflation rate, SBI interest rates, Return On Assets (ROA), Earning Per Share (EPS) jointly affect the stock returns on infrastructure companies listed on the Indonesia Stock Exchange. Partially shows that the inflation rate variable has a positive effect on the stock



Returns. This indicates that the higher the inflation, the infrastructure company's stock returns are rising. Partially, it is proven that the SBI interest rate variable has a negative effect on stock returns. This means that an increase in SBI interest rates can increase the burden of the company (issuer) to obligations/debts to banks that can reduce corporate profits, share prices go down, and ultimately followed by a decrease in stock returns. Partially shows that the Return on Assets (ROA) variable has a negative effect on stock returns. This indicates that companies with good or increasing Return On Assets (ROA) conditions do not have the potential to be an attraction for some investors. Partially proven that the Earning Per Share (EPS) variable has a positive effect on stock returns. This means that the greater Earning Per Share (EPS), it will increase the acquisition of stock returns. The higher the value of Earning Per Share (EPS) means, the greater the level of the company's ability to generate profits per share for investors.

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