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# THE DETERMINANTS OF STOCK RETURNS ON BUILDING CONSTRUCTION COMPANIES LISTED ON STOCK EXCHANGE: CASE IN INDONESIA

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**Abstract**

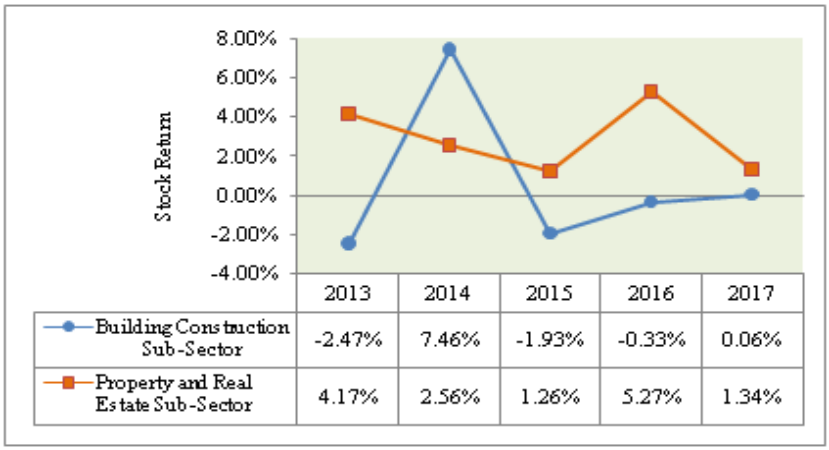
*The purpose of this research is to analyze the effect of macroeconomics (economic growth, inflation, exchange rate and interest rate) and corporate financial performance (leverage and profitability) on stock returns of Building construction companies in Indonesia. The research uses annual data taken from the Indonesia Stock Exchange, Bank of Indonesia and the Central Bureau of Statistics for the period 2013 to 2017. Populations of this research are 17 building construction companies listed on the IDX. The companies that meet the sample criteria are 9 companies. The analytical method used is the panel data regression method. The results showed that economic growth, inflation, exchange rate, interest rate, and debt to equity ratio have a positive and significant effect on stock returns, while return on equity has negative and insignificant effect.*

*Keywords: Stock return; macroeconomics; return on equity; debt to equity ratio*

## INTRODUCTION

The property, real estate and building construction sectors are one of the sectors that has stock price movements tend to increase, but the stock return experienced not stable fluctuations and tended to decline. The property, real estate and building construction sector consists of two sub-

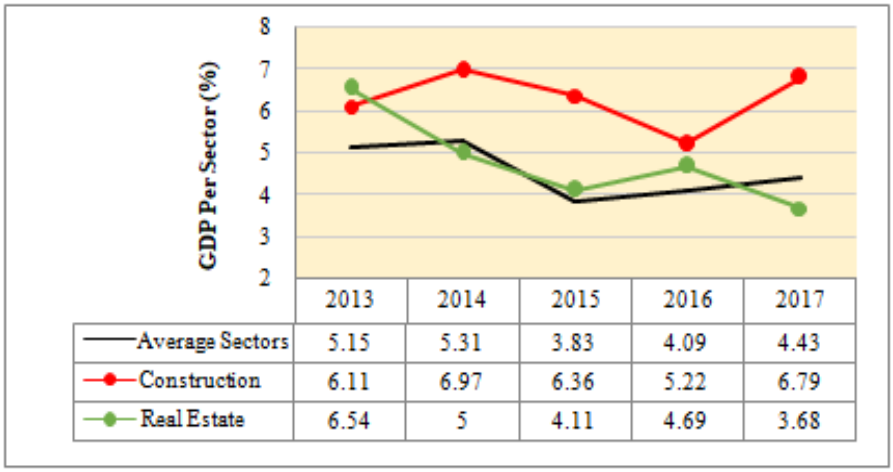
sectors, namely the building construction sub-sector and the property and real estate sub-sector. Among the two sub-sectors, the stock return of the building construction tends to decrease more than the property and real estate sub-sector.




| | 2013 | 2014 | 2015 | 2016 | 2017 |
|---|---|---|---|---|---|
| Building Construction Sub-Sector | -2.47% | 7.46% | -1.93% | -0.33% | 0.06% |
| Property and Real Estate Sub-Sector | 4.17% | 2.56% | 1.26% | 5.27% | 1.34% |

Figure 1. Stock Return of the building construction sub-sector and property and real estate sub-sector (Source: Yahoo finance, 2018)

Figure 1 shows the average of stock return of the building construction sub-sector under the stock return of property and real estate sub-sector. Meanwhile based on the GDP per sector in 2013-2017, growth of the construction sector is higher than the property and real estate sub-sector and other sectors (Figure 2). In production value, the construction sector also has quite high contribution to national economy. During the last 5 years, the average contribution of the construction sector to GDP was 10.24%, while the industry average was 5.68%. This contribution is not in accordance with the stock return movement of the building construction sub-sector.




| | 2013 | 2014 | 2015 | 2016 | 2017 |
|---|---|---|---|---|---|
| Average Sectors | 5.15 | 5.31 | 3.83 | 4.09 | 4.43 |
| Construction | 6.11 | 6.97 | 6.36 | 5.22 | 6.79 |
| Real Estate | 6.54 | 5 | 4.11 | 4.69 | 3.68 |

Figure 2. Growth of Gross Domestic Product of Construction Sector, Property and Real Estate, and Other Sectors (Source: Indonesia Central Berau Statistic, 2018)

Construction sector experienced GDP growth due to the acceleration of infrastructure development by the government and most of them involved several national building construction companies. According to the data of Center for Indonesia Taxation Analysis (CITA), Indonesia's infrastructure development budget experience growth. At the end of 2014, the infrastructure budget was only 9.48% of state expenditure, in 2015 it increased to 14.64% and continued so that in 2017 it became 19.11%.

From the description above, it can be seen that in recent years growth of the building construction sub-sector's GDP is quite good, but not so with the stock return. Based on these conditions, it is necessary to know the factors that cause a decrease in stock returns in the building construction sub-sector.

Arbitrage Pricing Theory (Ross, 1976) explains that the level of profit of an investment can be influenced by various factors in the economy (macroeconomics) and factors in the industry/companies. Macroeconomics are the factors that are outside the company but have an influence on the increase or decrease in company performance. Ho et al. (2013) argue that both company-specific and macroeconomic news can significantly affect the volatility of stock returns.

In addition to macroeconomic factors, micro-economic factors namely the company's financial performance also affect stock returns. Company performance is usually measured by financial ratios.

Several studies have discussed the influence of these factors on stock returns with research results that are quite diverse. Abbas et. al (2014), Laichena and Obwogi (2015), Mugambi and Okech (2016) found the economic growth reflected by Gross Domestic Product (GDP) had a negative influence on stock returns, while Al-abedallat and Al Shabib (2012), Purnama and Purwabangsa (2017) found that GDP had an influence positive for stock returns. Kurniasari et. al (2018), Gatuhi et. al (2015), Sailendra and Suratno (2014) and Halim (2013) found that inflation as one of the macroeconomic factors has negative effect on stock returns. Then, for Dirga et. al (2016), Mugambi and Okech (2016) found that inflation has a positive effect on stock returns. Besides GDP and inflation, Kurniasari et. al (2018), Ardhi et. al (2017), Halim (2013), Nisha (2015), Abbas et. al (2014), Alam and Rashid (2014) found that the exchange rate has negative effect on stock returns, while Denziana et. al (2015) and Dirga et. al (2016) shows the opposite results. Then Kurniasari et. al (2018), Halim (2013), Alam and Rashid (2014) found that interest rates have a negative effect on stock returns, while Denziana et. al (2015), Gatuhi et. al (2015) and Dirga et. al (2016) shows the opposite result which is positive.

In addition to macroeconomic factors, internal factors, namely the company's financial performance also have an effect on stock returns. One of indicator of company performance is profitability and leverage. ROE is one of the profitability ratios that show management efficiency in managing its capital to be a profit. Therefore, ROE is one of the factors that are highly considered by potential investors and shareholders. The DER is one of the debt ratios that investors need to pay attention to.

Denziana et. al (2015) and Ardhi et. al (2017) found that ROE had a significant positive effect on stock returns. While Mulya and Turisna (2016) dan Anwaar (2016) found that ROE had no significant effect. Sudiyatno and Suharmanto (2011) found that ROE had a negative and significant effect on stock returns. Previous research on the influence of DER on stock returns also showed different results. Bustami and Heikal (2019), Purwitajati and Putra (2016) show that DER has a positive effect on stock returns. While Borhan and Ghazali (2017) concluded that DER has a significant negative effect on stock returns.

Based on the phenomenon that occurs in the stock returns of the building construction sub-sector as well as the results of previous studies, it is necessary to conduct further research on the effects of macroeconomics (economic growth, inflation, exchange rate and interest rates) and the effect of corporate financial performance (return on equity and debt to equity ratio) on the stock return of building construction companies in Indonesia.

## REVIEW OF THE LITERATURE

**Arbitration Pricing** was introduced by Ross in 1976 who states that the price of an asset can be influenced by various factors. The application of the APT model includes various risk factors because in reality systematic risk is not only caused by one source, but also by economic factors which some of these factors are called Multifactor. Multifactor model is a model of the securities rate of return that puts the rate of return in order to react to several systematic factors (Bodie et al, 2004).

**Macroeconomics** is an overall economic study, which is useful both to explain economic events and to formulate economic policies. Macroeconomic factors are factors that are outside the company but have an influence on the increase or decrease in company performance both directly and indirectly (Samsul, 2015).

**Economic growth** is defined as an increase in the output of goods or materials and services in a certain period of time (Hasyim, 2016). According to Mankiw (2010), Gross Domestic Product is often considered a benchmark for how well the economy is performing. According to the Central Statistics Agency/BPS (2018), GDP is the amount of added value for goods and services produced by various production units in a country's territory within a

certain period of time (usually one year). The GDP growth is the percentage of growth in the amount of added value for goods and services produced by production units.

**Interest Rate** The interest rate states the rate of payment on a loan or other investment, over and above principal repayment, in terms of an annual percentage. (Dornbusch, et. al, 2008). According to Sukirno (2011) interest is expressed as a percentage of capital. The interest rate is one indicator in determining whether someone will invest or save.

**Exchange Rate** is the price of foreign currency (Dornbusch, *et. al,* 2008). Companies that have transactions and foreign debt must provide payments in the form of foreign currencies. The US Dollar has become the currency used in international trade. Theoretically the difference in direction of the relationship between exchange rates and stock prices can be explained by traditional approaches and balance portfolio models (Granger et. al, 1998). The traditional approach says that the relationship between exchange rates and stock prices is positive where changes in exchange rates affect the company's income and operating costs. While the portfolio balance approach states that the exchange rate of the local currency will appreciate the foreign exchange rate and show a negative relationship with the direction of causality from the stock market to the money market, in accordance with very fast financial market interactions.

**Inflation** is one of the macroeconomic aspects that can be used to configure national economic conditions which are marked by price increases. According to Sukirno (2011), inflation is an increase in prices of goods that are general in nature and constantly. The inflation rate can have a positive or negative effect depending on the degree of inflation itself. Excessive inflation can harm the economy as a whole and reduce stock prices in the market, as well as very low inflation can cause stock prices to move slowly (Samsul, 2015).

***Signaling Theory***, the signal is an action taken by company management in giving instructions to investors regarding management's views on the company's prospects (Brigham and Houston, 2014). Signaling theory originated from the writings of George Akerlof (1970) who introduced the term asymmetric information. Brigham and Houston (2014) explain that asymmetric information is a situation where managers have different (better) information about company prospects than investors. One type of information issued by companies that can be a signal to parties outside the company is an annual report that contains information on company performance.

**Return On Equity (ROE)** is a ratio to measure net income after tax with own capital (Kasmir, 2013). This ratio emphasizes how the efficiency of the company's operations is transformed into profits for the company owners. ROE is used to assess the amount of

investment profit that an investor will get and to assess the company's ability to pay its debt to creditors based on the level of use of assets and other resources. ROE can be calculated as follows (Ross et. Al, 2016).

$$Return\ On\ Equity = \frac{Net\ Income}{Total\ Equity}$$

**Debt to Equity Ratio** is one of the solvability ratios or also called laverage ratio. This ratio shows the company's ability to fulfill its obligations. Total Debt Ratio takes into account all debts due for all creditors. The formula for calculating the Laverage Ratio (Ross et. Al, 2016) is as follows:

$$Debt\ Equity\ Ratio = \frac{Total\ Debts}{Total\ Equity}$$

According to Kasmir (2013), Debt to Equity Ratio (D/E) is a ratio used to assess debt with equity. If the D/E ratio is higher, it shows the higher funding provided by shareholders for the company. Conversely, the lower the ratio, the lower the use of corporate debt, so that the company's ability to pay for its long-term obligations is getting better.

According to Bringham and Houston (2006), the higher the company's debt, the higher the risk of using the debt, so it tends to reduce stock prices. The theory of Laverage Modigliani and Miller/M&M (1958) states that companies will get better when using bigger debt. This is because an increase in debt will increase the value of the company due to tax savings. The assumption used by M&M is that there is no effect of bankruptcy.

**Stock Return**, the form of instruments in the capital market is one of the securities in the form of shares. According to Tandelilin (2010), stock returns are one of the factors that motivate investors to invest and also a reward for the courage of investors to risk their investments. Gumanti (2011) explains if investment is defined as ownership (purchase of an asset), then the return on investment is defined as the Rate of Return. Return of investment can be in the form of capital gains or capital losses. To measure stock returns can be done with or without calculating the amount of cash (dividends) because in practice dividends are not distributed every year. The stock return formula without dividends can use the following formula (Samsul, 2015):

$$\mathrm{R}_i = \frac{\mathrm{P}_{it} - \mathrm{P}_{it-1}}{\mathrm{P}_{it}} \mathrm{x}\ 100\%$$

The answer to the research question is based on the hypothesis. The hypothesis in this study is as follows:

$H_1$: Economic growth has positive effect on stock returns of building construction subs sector.

$H_2$: Inflation Economic growth has negative effect on stock returns of building construction subs sector.

$H_3$: Exchange rate has positive effect on stock returns of building construction subs sector.

$H_4$: Interest rate has negative effect on stock returns of building construction subs sector.

$H_5$: Return On Equity (ROE) has positive effect on stock returns of building construction subs sector.

$H_6$: Debt to Equity Ratio (D/E) has negative effect on stock returns of building construction subs sector.

## RESEARCH METHOD

Research is a causality study which aims to find the influence of independent variables (economic growth, inflation, rupiah exchange rate and interest rate, return on equity and debt to equity ratio) to the dependent variable (stock return). The study population is all building construction sub-sector companies listed on the Indonesia Stock Exchange which in 2019 were 17 companies. The research sample was determined purposively, with the criteria that the company is continuously listed on the Indonesia stock exchange in 2013-2017 and the company's financial statements available and accessible. There are 9 companies that meet the sample criteria.

The research data is panel data (pooled data). Based on the source data, the data used is secondary data. Source data from the website finance.yahoo.com, www.bps.go.id, Bank Indonesia, which is downloaded from the website www.bi.go.id, company reports on the Indonesia Stock Exchange which are downloaded from the website www.idx.co.id.

The data analyzed were obtained descriptively and inferentially. Descriptive analysis is carried out to explain the research variables, inferential analysis is used to answer research problems, using panel data multiple regression. The equation used is as follows:

$$Y_{it} = \alpha + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \beta_4 X_{4it} + \beta_5 X_{5it} + \beta_6 X_{6it} + W_{it} \quad \ldots\ldots\ldots (1)$$

Where:

$Y_{it}$ : Dependent variable (stock return)

$\alpha$ : Constanta

$\beta_n$ : Regression coefficients

$X_{it}$ : Independent variable (economic growth, inflation, exchange rate, interest rate, return on equity, debt to equity ratio)

*i* : Entity -*i*

*t* : Period -*t*

$W_{it}$ : Joint error rate

## RESULTS AND DISCUSSION

Table 1 shows an overview of research data (2013-2017). The average stock return of the building construction sub-sector is 0.558%. The highest share return was 12.42% of PT Waskita Karya (Persero) Tbk (WSKT). The highest stock return indicates that the percentage of profits obtained by the company is relatively higher compared to other construction sector companies in the study. The smallest stock return is the share of PT Nusa Raya Cipta Tbk (NRCA) of -9.34% which occurred in 2013. The negative and smallest return value indicates that in 2013 NRCA experienced the biggest decline in even the value of shares compared to other companies.

Table 1. Description Statistic of Research Variables

| | N | Minimum | Maximum | Mean |
|---|---|---|---|---|
| Stock Return | 45 | -0,0934 | 0,1242 | 0,00558 |
| PDB | 45 | 0,0479 | 0,0556 | 0,05094 |
| Inflation | 45 | 0,0302 | 0,0838 | 0,05344 |
| Exchange Rate | 45 | 10.451 | 13.392 | 12.482,40 |
| Interest Rate | 45 | 0,0456 | 0,0755 | 0,06422 |
| ROE | 45 | -0,5099 | 0,2859 | 0,13428 |
| DER | 45 | 0,8400 | 5,2800 | 2,11089 |
| Valid N (listwise) | 45 | | | |

Economic growth (GDP) for 5 years has an average value of 5.09% with a maximum value of 5.56% that occurred in 2013. While the lowest value of 4.79% occurred in 2015. Economic growth in the year 2013 was quite high because of the impact of global economic growth, especially in America and China. However, this figure does not meet the target of 6.3%, because in 2012 economic growth reached 6.2%. Furthermore, economic growth began to decline in 2014, a decline that occurred due to a decline in a number of production, namely food production due to the decline in the planting period, crude oil production, and coal which later affected the manufacturing industry. In addition, trade distribution also slowed due to declining import supply for capital goods, raw materials/auxiliary materials, and consumer goods as well as slowing construction performance due to the late realization of infrastructure spending.

The average value of inflation is 5.34%. The highest inflation occurred in 2013 (8.4%), one of which was due to increases in food prices and subsidized fuel oil prices. Inflation declined and the lowest occurred in 2016 (i.e. 3%) due to the decline in prices of several strategic energy commodities such as subsidized fuel oil, electricity tariffs for customers of 1,300 VA and above, and 12kg LPG.

The average exchange rate of the US dollar during 2013-2017 was Rp. 12,482. The lowest exchange rate in 2010 was Rp. 10,451 and the highest occurred in 2015, Rp. 13,392. In 2015 the rupiah declined due to speculation of rising interest rates in the US and the devaluation of the yuan, as well as large stock selling (hot money). Hot money caused the Jakarta Composite Index to decline and the rupiah obtained from the sale was bought by the dollar so that there was a high demand for the dollar and the dollar's value increased. In 2016 the rupiah exchange rate fell, meaning the rupiah strengthened 0.7% compared to the condition in 2015. Strengthening of the rupiah in accordance with the capital allocation into Indonesia and improving the structure of foreign exchange demand.

The interest rate in this study uses the Bank Indonesia (BI) Rate for the period 2013 to 2015 and the BI 7-Day Repo Rate for 2016 and 2017. This is because since August 19 2016 the BI 7-Day Repo Rate has been implemented as the benchmark interest rate. During the period 2013-2017 the average interest rate was 6.42%. The highest interest rate occurred in 2014 which was 7.55%. The BI policy is in line with stabilization measures to control the current account deficit and also the policy of the National Non-Cash Movement. The lowest interest rates occur in 2017 with a value of 4.56%. Low interest rates can increase investment through cheap credit expansion.

The average ROE of the building construction sub-sector is 13.43%. This means that every hundred rupiah shareholders' equity can be generated by 13.43 rupiah in net income. The highest ROE occurred at PT Surya Semesta Internusa Tbk (SSIA) at 28.59% which occurred in 2013. The lowest is the ROE of PT Nusa Konstruksi Enjiniring Tbk (DGIK) -50.99% which occurred in 2016, meaning the company suffered a loss.

The average D/E of the building construction sub-sector is 2.11 times, which means that the company is in an unsolvable condition because every hundred rupiah of equity covers 211 rupiah in total debt. The smallest D/E occurred in PT Nusa Raya Cipta Tbk (NRCA), which was 0.84 which occurred in 2015. This shows that the composition of debt is lower than the equity. It means that the company's ability to pay its debt is better than other companies in this study. The highest D/E is PT Adhi Karya (Persero) Tbk (ADHI) which is 5.28 which shows that the composition of total debt is 5.28 times greater than the total equity.

Regression approaches need to fulfill the classical assumptions so that the resulting equation is the best linear unbiased estimator. Classic assumption tests include normality, autocorrelation, and multicollinearity tests.

Normality test was carried out by Jarque-Bera test. The data processing output shows the Jarque-Bera value is 1.7475 with a probability value > 0.05. Thus it can be concluded that the research data is normally distributed.

Multicollinearity test was carried out by correlation test. The results of data processing show the correlation coefficient of the independent variable Inflation ($X_2$) and Exchange Rate ($X_3$) worth more than 0.9, which indicates there are symptoms of multicollinearity. Therefore the transformation is done using natural logarithms for the Exchange Rate ($X_3$) variable.

Autocorrelation Test results show Dubrin-Watson (DW) value = 1.9531. The value of dU = 1.8378 in the DW table for sample n = 44 and k (number of variables) = 6. Thus it can be concluded that there is no problem of autocorrelation in this research regression model because du <DW <4-du (1,8378 < 1.9531 <2.1622.

This study uses panel data analysis. There are three alternative panel models, namely methods with common effect models, fixed effect models and random effect models. The selection of the best model is done by doing three tests, namely Chow Test, Hausman Test and Lagrange Multiflier Test. Based on the results of the chow test, because the Common Effect Model is selected, the Langrange Multiplier test is conducted so that the exact estimation for the panel data regression model is the random effect method.

Table 2. Test Results of the Effect of Macroeconomic Factors and Internal Factors on Stock Returns of Building Construction Company Listed on the Indonesia Stock Exchange with Random Effect Model

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| C | -28.5602 | 8.3732 | -3.4109 | 0.0016 |
| PDB | 54.6117 | 21.2537 | 2.5695 | 0.0143 |
| INFLATION | 5.6049 | 1.0026 | 5.5907 | 0.0000 |
| LN EXCHANGE | 2.6663 | 0.7550 | 3.5317 | 0.0011 |
| INTEREST | 5.0535 | 2.0923 | 2.4153 | 0.0208 |
| ROE | -0.0347 | 0.0708 | -0.4896 | 0.6273 |
| DER | 0.0134 | 0.0038 | 3.4977 | 0.0012 |
| R-Squared | 0.7137 | Mean dependent var | | 0.0055 |
| Adjusted R-Squared | 0.6673 | S.D. dependent var | | 0.0466 |
| F-Statistic | 15.3718 | Sum squared resid | | 0.0267 |
| Prob(F-Statistic) | 0.0000 | Durbin-Watson stat | | 1.9531 |

Table 2 shows that the regression model built is fit. This conclusion is taken because the probability of the F-statistic is 0.0000. The determination coefficient of 0.7137 shows the ability of independent variables to explain the variability of stock returns is 71.37%.

From the estimation results using the Random Effect Model test, the panel data regression equation is obtained as follows:

STOCK RETURN=-28.0732 + 54,6117P DB + 5.6049 INFLATION + 2.6663 LN EXCHANGE + 5.0535 INTEREST -0.0347 ROE + 0.0134 DER ..... (2)

Referring to Table 2 is presented equation (2). The equation shows:

- Constants have a coefficient of -28,5602 with a probability of 0.0016 (<0.05) so that the constant is significant. This shows that when the independent variable is 0, then the stock return (Y) is -28.0732. This shows that investors experience capital loss.
- GDP has a coefficient of 54.6117 positive value with a probability of 0.0143 (<0.05), then GDP has a significant effect. Regression coefficient value shows that if there is an increase in GDP of 1 unit, then the Stock Return variable (Y) increases by 54.6117 assuming the other variables are constant.
- Inflation has a coefficient of 5.6049 positive with a probability of 0.000 (<0.05) so that inflation has a significant effect. Regression coefficient value shows that if there is an increase in GDP of one unit, then the Stock Return variable (Y) increases by 5.6049 assuming the other variables are constant.
- Exchange Rate has a coefficient of 2.6663 positive with a significance of 0.0011 (<0.05), the Exchange Rate has a significant effect. The regression coefficient shows that if there is an increase in the Exchange Rate of one unit, then the Stock Return variable (Y) increases by 2.6663, assuming the other variables are constant.
- Interest Rate has a coefficient value of 5.0535 positive with a probability of 0.0208 (<0.05), Interest Rate has a significant effect on stock returns. Regression coefficient value shows that if there is an increase in Interest Rate by one unit, then the Stock Return variable (Y) increases by 5.0535, assuming the other variables are constant.
- ROE has a regression coefficient of -0.0134 with a probability of 0.6273 (> 0.05) then ROE has no significant effect.
- DER has a coefficient of 0.0134 with a probability of 0.0012 (<0.05), meaning that DER has a significant effect. Regression coefficient value shows that if there is an increase in DER of one unit, then the Stock Return variable (Y) increases by 0.0134, assuming the other variables are constant.

Economic growth (GDP) has a significant positive effect on stock returns. These results are in accordance with the $H_1$ hypothesis and in line with the research of Kibria et. al (2014), as well as Purnama and Purbawangsa (2017). Economic growth illustrates how much national income is generated by the industrial sector. The higher the economic growth of a country shows that the demand for goods is increasing, including demand in the field of building construction. Good economic conditions will facilitate development activities, so that active construction activities can foster investor interest in buying stock which in turn can affect stock returns.

Inflation has a significant positive effect on stock returns. The results of this study are not in accordance with the H2 hypothesis, that is inflation has a negative effect on stock returns. However, the results of this study are in line with the research of Dirga et.al (2016) and Mugambi and Okech (2016). Inflation has a positive effect on stock returns indicating that when there is inflation the stock returns still increase, it mean that the performance of the company is not disturbed because the development project continues. As is known that the majority of construction companies, especially those listed on the IDX, are companies that run infrastructure projects. Therefore, despite inflation which causes the price of goods to rise, the demand for construction services continues. When costs rise due to inflation, the company can charge the increase in costs to users of construction services. In this case, the relatively stable business margin is an indicator that can support the performance of the company. The results of this study are different from the results of research by Laichena and Obwogi (2015), Sailendra and Suratno (2014) and Dirga et. al (2016), that is inflation has a negative and significant effect on stock returns. Dirga et. al (2016) explains that investors will tend to release their stocks if there is an increase in inflation because the return received by investors will decrease in value, thus causing the stock price to fall. But the opposite can happen when an increase in inflation can increase the profitability of a company if the increase in factor production costs is lower than the increase in output prices that can be obtained by the company.

The exchange rate has a significant positive effect on stock returns. These results are in accordance with the $H_3$ hypothesis and in line with the research of Laichena and Obwogi (2015), Mugambi and Okech (2016), and Dirga et.al (2016) which showed that the rupiah exchange rate had a positive effect. This condition is caused by the pattern of data distribution of stock returns which tends to rise when the exchange rate increases. The rupiah exchange rate has a positive effect on stock returns indicated because the transactions of construction companies use more rupiah than US dollars. This is related to the Program for Increasing the Use of Domestic Products (P3DN), including in infrastructure and construction projects. Different results are shown by the research of Kurniasari and Yusuf (2018); Ardhi et. al (2017); and Nisha (2015) which shows that the exchange rate has a negative effect on stock returns. The increase in the

rupiah exchange rate is directly proportional to the loss of consumer goods issuers. When the exchange rate rises, the price of goods will increase, especially imported goods so that purchasing power decreases and people prefer to save money rather than spending it.

Interest Rate has a significant positive effect on Stock Return. This is not in accordance with the hypothesis $H_4$ where the interest rate has a negative effect on stock returns. However, the results of this study are in line with the results of Dirga et. al (2016) and Gatuhi et. al (2015). The effect of interest rate trends on construction companies will be related to the capital structure, which in general high interest rates will cause investors to be reluctant to fund development, especially through debt. However, the influence of positive interest rates indicates that the shares of building construction companies listed on the Indonesia Stock Exchange in the period 2013 - 2017 are not a problem with the increase in interest rates. This is related to government policy in accelerating development programs with the existence of infrastructure guarantee institutions, which one of the benefits the agency is reducing infrastructure costs with a lower interest expense on loans, to reduce tariffs paid by the community (IIGF, 2018). In addition, banking policies to increase the flow of development funds with competitive interest rates also had an impact on development progress. The findings of this study are different from the results of the study by Kurniasari et. al (2018), Halim (2013), and Alam and Rashin (2014) that interest rates negatively affect stock returns.

Return On Equity (ROE) shows a negative but not significant effect on stock returns. The results of this study are not in accordance with the hypothesis proposed. This condition is caused by the data distribution pattern of stock returns which tends to rise even though the ROE decreases. The results of the testing mean that it is not in accordance with the estimates, especially the concept of signaling theory. This shows that information about ROE is not taken into consideration by investors when investing in the building construction sector. Other research results that are in accordance with this study are Sailendra dan Suratno (2014), Mulya and Turisna (2016) who found that ROE had no significant effect. The results of this study are not in line with Ghi (2015) and Ardhi et.al (2017) research which shows that ROE has a significant positive effect.

Debt to Equity Ratio (D/E) has a significant positive effect on stock returns. The results of this study are incompatible with the hypothesis $H_6$. The results of this study are in line with the research of Bustami and Heikal (2019), Purwitajati and Putra (2016) who found that DER had a positive effect on stock returns. This finding supports the theory of Modigliani and Miller (1958) which states that companies will get better when using bigger debt. This M&M theory states that increasing debt will increase the value of the company due to tax savings. Borhan and Ghazali (2017) found different results, namely DER which negatively affected stock returns.

The results showed that GDP is a macroeconomic factor that has the greatest influence on stock returns in the building construction sub-sector. This needs to be a concern for managers of building construction sub-sector companies, stockholders and potential investors who will invest in stocks of this sector.

## CONCLUSION

The results showed that GDP, inflation, exchange rate, interest rates, and leverage had a positive and significant effect on stock returns, while ROE has no significant effect on stock returns. Among all variables, GDP is the most influential factor on stock returns in the building construction sub sector. Therefore, managers of building construction sub-sectors as well as investors and prospective investors who invest in shares of this sector, they need to pay attention to Indonesia's GDP, so they can get returns as expected. However, GDP growth also needs to be supported by government policies in strengthening the openness of the investment climate so as to increase development in various industries that have an impact on improving the prospects of the building construction sector.

From the research side, to get the maximum research results, especially information about factors that affect stock returns in the building construction sub-sector, the regression model in this study can also be supplemented by other variables such as company's liquidity or activities ratios so that the model's ability to explain the variability of stock returns is increasingly well. In addition, future researchers can conduct similar studies in other industrial sectors, because each sector has a different sensitivity to both external and internal factors of the company.

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