

THE EFFECTS OF SELECTED FINANCIAL RATIOS TOWARD STOCK RETURN: A STUDY OF HEAVY CONSTRUCTION AND CIVIL ENGINEERING INDUSTRIES IN INDONESIA FOR THE YEAR 2018 TO 2020

Mohammad Fathan Saleh
Wiwiek Mardawiyah Daryanto

ABSTRACT

From 2020 to 2024, The Indonesian Government, through President Jokowi, focuses on Human Resource Development (HRD). In contrast, from 2014 to 2019, its previous strategy was focused on infrastructure development. One of the essential aspects of infrastructure is its contribution to economic growth through its previous strategy, with the Gross Domestic Product (GDP) reaching an overall 10% contribution yearly. From 2015 it has achieved 10,38% with a growing trend in 2019, 10,75% with a slight decrease to 10.71% in 2020. In 2020, the construction GDP yearly growth started to decline to minus 3.26%. At the same time, the overall GDP of Indonesia declined to a minus 2,07% cumulative-to-cumulative (c-to-c) due to Covid-19. However, the construction industry still ranked fourth rank based on-field contribution. This research focuses on analyzing the selected financial ratios. The profitability (ROA & ROE), solvency (DER), liquidity (CR), and market measurement (PER) toward the stock return in the Heavy Construction & Civil Engineering industry. The data are analyzed using SPSS 25 software with multiple regression analysis methods and assumption tests. The data are gathered by secondary data based on the financial statements on the company website, with population data of 15 listed companies in the Indonesian Stock Exchange within the period of 2018 to 2020. This study confirms that all ratios simultaneously affect the stock return. Other findings also indicate that the liquidity (CR) has a significant negative effect on stock return and the Market Measurement (PER) has a significant positive effect on the stock return of the listed companies.

Keywords: Liquidity, Market, Stock Return, Construction, Multiple Regression

INTRODUCTION

From 2014 until 2019, through President Joko Widodo, the Indonesian government has focused on building infrastructure. As infrastructure can stimulate economic growth, it also has an important aspect, such as their contribution to the economy with Gross Domestic Product (GDP), which has reached an overall 10% contribution yearly from 2015 to 2020. Meanwhile, from 2020 to 2024, President Jokowi changed its strategy to Human Resource Development (HRD) rather than infrastructure again to increase general competence. Albeit the focus shift, the infrastructure development has not stopped yet and is still on track. The process means, while the focus is not on the infrastructure anymore, the government still has an ongoing commitment to manage construction in years to come as the Indonesian Republic itself is still behind other countries in manners of development. Since 2017, the construction GDP has increased until 2019, the final year of the infrastructure strategy focus that President Joko Widodo implemented. A slight decrease can also reflect in the Indonesian GDP the year 2020, which amounted to a minus 2,07% according to the Ministry of Finance, caused by the pandemic situation of Covid-19, which has impacted the health of the Indonesian community and, in turn, affected the whole economic system.

Starting from 2017, the growth trend in construction is declining, amounting to a minus 3,26% in 2020. The growth rate of construction has a negative trend caused by the Covid-19 pandemic, which causes several constructions to hold. The Covid-19 is one of the reasons that affected the construction sector's negative growth rate, reflecting the heavy construction and civil engineering companies profit or loss during the year. From the seventeen sectors, construction is ranked 4th in the contribution category for 2020. Construction itself still has the probability of growing and is one of the main contributors to GDP, which means it has the potential for better performance in the future.

The capital market plays a critical part in the economy. It combines long-term funds parties with those who need financial product investment facilities such as stocks, bonds, mutual funds. From 2015 to 2019, the infrastructure sector has been the highlight of Indonesia's economic wheel and continues in 2020, albeit varies with its price. Furthermore, the stock market is sometimes inefficient, as the price of its stocks does not reflect the condition and company financial performance. This study aims to analyze the connection between stock returns and the financial ratios that investors usually use based on the research gap of previous studies. Return on assets (ROA) and Return of Equity (ROE) as a profitability indicator, Debt to Equity Ratio (DER) as a solvency indicator, the Current Ratio (CR) as a liquidity indicator, and Price Earnings Ratio (PER) as a market measurement for the 15 heavy construction and civil engineering sector under the infrastructures industry listed in the Indonesian Stock Exchange during 2018 to 2020 are the ratios used in this research.

LITERATURE REVIEW

Financial Ratio Analysis

The financial ratio analysis is used to assess the company's financial condition, Brazier and Daryanto (2019). The assessment is based on its financial position report, profit and loss statements, total profit and loss statements, financial statement notes, cash flow statements and equity changes. Users can evaluate the company's condition, such as its debt level, operational efficiency, profitability, Etc., from the financial statement data and financial ratios as a tool to carry out the assessment. Financial ratios could be used as an instrument. According to Gibson (2012), Financial ratios are also an assessment tool for interpreting and explaining financial statements on company profitability, liquidity, and debt. According to Weygandt, Kimmel & Kieso (2013), "Ratios may

provide indication of underlying conditions that are not visible from individual components of the financial statement and the use of a single ratio alone is not significant". Therefore, ROA, ROE, DER, CR, and PER toward Stock Returns are the financial data and ratios used in this study.

Return on Asset (ROA)

According to Anthony, Hawkins, and Merchant (2011), "The return on assets reflects the company's profit from the investments of all financial resources engaged by the company. It is useful in order to assess how well your fund was used in business, regardless of the relative size of the resources of these funds." Pursuant to Daryanto, Yezzie, and Maharani (2020), the greater its percentage number shows the efficiency of the resources of a company. The ratio can be measured by:

$$\text{Return on Asset} = \frac{\text{Net Income}}{\text{Total Assets}}$$

Return on Equity (ROE)

According to Anthony, Hawkins, and Merchant (2011), "Equity return reflects how much a company has earned from the investments made by its shareholders. The present or future shareholders are interested in this ratio and also in the management because this is seen as a key indicator of shareholder creation of value." The ratio calculation is as follows:

$$\text{Return on Equity} = \frac{\text{Net Income}}{\text{Total Equity}}$$

Debt-to-Equity Ratio (DER)

According to Gitman and Zutter (2015), "The debt-to-equity ratio measures the share of total liabilities used to finance the company's assets. The higher the ratio, the bigger the company's financial leverage." The ratio calculation is as follows:

$$\text{Debt to Equity Ratio} = \frac{\text{Total Liabilities}}{\text{Total Equity}}$$

Current Ratio (CR)

According to Anthony, Hawkins, and Merchant (2011), "Current ratios are an important example of a company being able to meet its present obligations, because the majority of its current assets will be converted into cash in one year." In addition, Gitman and Zutter (2015) stated that "The current ratio is one of the best cited ratios of finance and measures the ability of the company to fulfil its short-term obligations. A higher current ratio means higher cash." In contrast, Afriza and Daryanto (2019) states that a too high current ratio, indicates that the company has a problem in managing their current assets. The ratio calculation is as follows:

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

Price Earnings Ratio (PER)

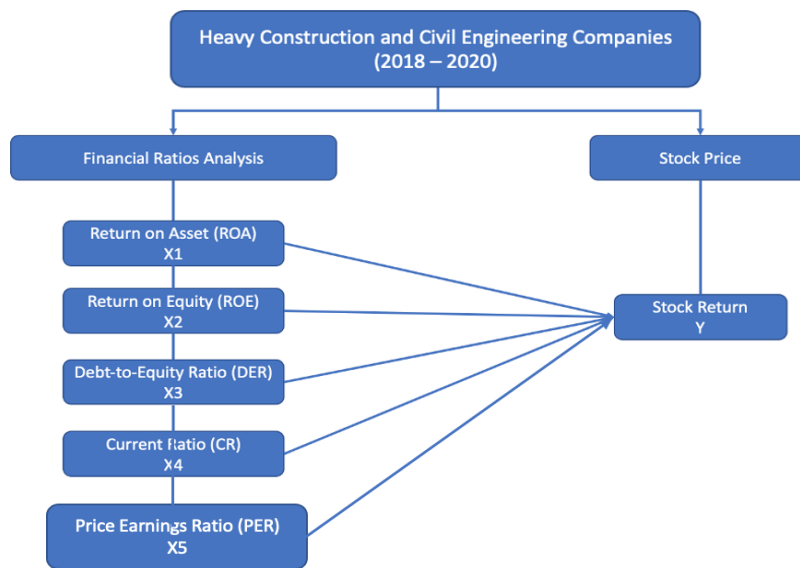
According to Nalurita (2015), PER measures how investors assess future growth respect as reflected in stock prices, which investors are willing to pay for every penny profit from the company. The higher its ratio indicates that investors have good expectations about future developments in the company. According to Jogiyanto (2010) in Nalurita (2017) the ratio of stock price to earnings, indicated how much investors assess the price of the shares on multiple earning. The ratio calculation is as follows:

$$\text{Price Earnings Ratio} = \frac{\text{Market Price Per Share}}{\text{Earnings Per Share}}$$

METHODOLOGY

This research's conceptual framework is analyzed on the basis of the relationship between ROA, ROE, DER, and CR to Stock Returns. The data will span from 3 years between the period of 2018 to 2020 and using 15 companies listed in IDX under heavy construction and civil engineering.

Figure 1.1 Conceptual Framework



(Source: Saleh and Daryanto, 2021)

Based on the background, problem statements, research objectives, and conceptual framework that has already been explained, the hypothesis formulation of this research study made are:

1. (X_1): ROA has significant effect on stock returns
2. (X_2): ROE has significant effect on stock returns
3. (X_3): DER has significant effect on stock returns
4. (X_4): CR has significant effect on stock returns
5. (X_5): PER has significant effect on stock returns

In this research, the investigation uses a causal design. According to Zhang et al. (2014), “The relationship between two events is causation or cause. The first event is a cause, and the second event is an effect, which means that the second is a result of the first. Correlations should be causalities, while correlations do not have to be causalities. Causal inference not only requires correlation but counter actual dependency.” This research will analyze the effect of 15 companies selected vital financial ratios on stock returns from 2018 until 2020. The research is carried out in the regression analysis to investigate the hypothesis. Regression analysis is used to analyze impacts between return on asset, return on equity, debt-to-equity ratios, current ratios, and price-earnings ratio to stock returns.

The author uses the samples based on certain criteria which follows these certain rules:

1. Companies which are included in the heavy construction and civil engineering sub-sector in the new Indonesian Stock Exchange classification.
2. The research population came from Indonesian Stock Exchange for at least three years, from 2018 - 2020.
3. The companies which published an audited financial statement during the last three years, from 2018 - 2020.

Based on these three criteria, the author then chose the selected 15 companies which could be seen in Table 1.1

Table 1.1 15 Company Samples

| No. | Company Code | Company Name |
|-----|--------------|---------------------------------------|
| 1 | ACST | Acset Indonusa Tbk |
| 2 | ADHI | Adhi Karya (Persero) Tbk. |
| 3 | BUKK | Bukaka Teknik Utama Tbk. |
| 4 | IDPR | Indonesia Pondasi Raya Tbk. |
| 5 | JKON | Jaya Konstruksi Manggala Pratama Tbk. |
| 6 | NRCA | Nusa Raya Cipta Tbk. |
| 7 | PBSA | Paramita Bangun Sarana Tbk. |
| 8 | PTPP | PP (Persero) Tbk. |
| 9 | SSIA | Surya Semesta Internusa Tbk |
| 10 | TOTL | Total Bangun Persada Tbk |
| 11 | WIKA | Wijaya Karya (Persero) Tbk. |
| 12 | WSKT | Waskita Karya (Persero) Tbk |
| 13 | WEGE | Wijaya Karya Bangunan Gedung Tbk |
| 14 | TOPS | Totalindo Eka Persada Tbk. |
| 15 | PPRE | PP Presisi Tbk. |

(Source: Saleh and Daryanto, 2021)

Multiple regression analysis is used for the data analysis method in this study, while the data processed also used SPSS version 25 for the data handling. The multiple regression analysis uses return on asset, return on equity, debt-to-equity ratios, current ratios, and price earnings ratio for the independent variable and stocks returns for the dependent variable. The following Table 1.2 are taken to analyze the data:

Table 1.2 Variables and Measurement

| Type | Variables | Symbol | Formula |
|-------------|----------------------------|--------|---|
| Dependent | Stock Returns | Y | $Stock\ Returns = \frac{Current\ Stock\ Price}{Previous\ Stock\ Price} - 1$ |
| Independent | Return on Assets (ROA) | X1 | $Return\ on\ Asset = \frac{Net\ Income}{Total\ Assets}$ |
| Independent | Return on Equity (ROE) | X2 | $Return\ on\ Equity = \frac{Net\ Income}{Total\ Equity}$ |
| Independent | Debt-to-Equity Ratio (DER) | X3 | $Debt\ to\ Equity\ Ratio = \frac{Total\ Liabilities}{Total\ Equity}$ |
| Independent | Current Ratio (CR) | X4 | $Current\ Ratio = \frac{Current\ Assets}{Current\ Liabilities}$ |
| Independent | Price Earnings Ratio (PER) | X5 | $Price\ Earnings\ Ratio = \frac{Market\ Price\ Per\ Share}{Earnings\ Per\ Share}$ |

(Source: Saleh and Daryanto, 2021)

RESULT AND DISCUSSION

Coefficient of Determination

The coefficient of determination test aims to see the magnitude of independent variables in explaining the dependent variable for the regression model with the residual percentage variation of other variables excluded in the regression model that may affect the dependent variable in a regression model. The amount of coefficient of determination is determined from the R Square value. The higher its R^2 , the higher its ability to explain the higher dependent variable, is said to be The following is the test result of the coefficient determination explained in this study:

Table 1.3 Coefficient of Determination Test Results

| Model | R | R Square | Adjusted R Square | Standard Error of the Estimate |
|---|-----------------------|----------|-------------------|--------------------------------|
| 1 | (0,564 ^a) | 0,318 | 0,230 | 0,234267 |
| a. Predictors: (Constant), ROA, ROE, DER, CR, PER | | | | |
| b. Dependent Variable: Stock Returns | | | | |

(Source: Data Processed SPSS 25 Version, 2021)

Based on Table 1.3, the coefficient of determination for the regression model in this research study can be seen through the value of its R Square of 0,318 Meaning, all the independent variables, ROA, ROE, DER, CR, and PER, gave 31,8% explaining the dependent variable of stock returns. In contrast, the remaining score of 68,2% is another independent variable excluded from this research that might affect stock returns, which is not included in the regression model of the corresponding research study.

Test Statistics F

The simultaneous test aims to find whether all independent variables for the regression model have a simultaneous effect on the dependent variable. The test shows how much the independent variable can simultaneously affect the corresponding dependent variable. The test can be analyzed from the F value in the ANOVA table from the statistical analysis performed. If the p-value is less than the substantial level, the independent level significantly influences the dependent variable. Where the p-value is higher than the substantial level, the independent variable does not influence the dependent variable significantly. The result of the test using the corresponding variables are as follows:

Table 1.4 Test Statistics F Results

| (ANOVA ^a) | | | | | | |
|---|------------|----------------|----|-------------|-------|--------------------|
| Model | | Sum of Squares | df | Mean Square | F | Sig. |
| 1 | Regression | 0.998 | 5 | 0,200 | 3,636 | 0,009 ^b |
| | Residual | 2,140 | 39 | 0,055 | | |
| | Total | 3.138 | 44 | | | |
| a. Dependent Variable: Stock Return | | | | | | |
| b. Predictors: (Constant), ROA, ROE, DER, CR, PER | | | | | | |

(Source: Data Processed SPSS 25 Version, 2021)

Based upon Table 1.4 result, the F statistics has a value of 3,636 and Sig. of 0,009 < 0,05, which means H_1 is accepted. Following the result, stock returns as dependent variables are affected simultaneously by its independent variables: ROA, ROE, DER, CR, and PER.

Test Statistics T

The partial test aims to find whether each independent variable significantly affects the dependent variable or not. If the p-value is less than the significant level, the independent variable influences the dependent variable significantly. In the meantime, the independent variable significantly impacts the dependent variable if the p-value is higher than the significant level. The test result of each corresponding variable are as follows:

Table 1.5 Test Statistics T Results

| <i>(Coefficients^a)</i> | | | | | | |
|-------------------------------------|------------|-----------------------------|------------|--------------------------------|--------|-------|
| Model | | Unstandardized Coefficients | | Standardized Coefficients Beta | t | Sig. |
| | | B | Std. Error | | | |
| 1 | (Constant) | 0,046 | 0,110 | | 0,420 | 0,677 |
| | ROA | 1,470 | 0,801 | 0,505 | 1,835 | 0,074 |
| | ROE | -0,055 | 0,126 | -0,179 | -0,437 | 0,665 |
| | DER | -0,010 | 0,014 | -0,190 | -0,662 | 0,512 |
| | CR | -0,124 | 0,057 | -0,314 | -2,178 | 0,035 |
| | PER | 0,001 | 0,000 | 0,290 | 2,175 | 0,036 |
| a. Dependent Variable: Stock Return | | | | | | |

(Source: Data Processed SPSS 25 Version, 2021)

Based on Table 3.8 of T test, the author found that the multiple regression linear model in this research study is:

$$SR = 0,046 + 1,470ROA - 0,055ROE - 0,010DER - 0,124CR + 0,001PER + e$$

Notes:

- SR : Stock Returns (dependent variable)
- < : Constant
- ® : Regression coefficient of each independent variable
- ROA : Return on Asset
- ROE : Return on Equity
- DER : Debt-to-Equity Ratio
- CR : Current Ratio
- PER : Price Earnings Ratio
- e : Error

Profitability and Stock Return (Rejected)

Based on Table 3.8 of the statistics test T result, the coefficient regression value from return on asset (ROA) has a positive amount of 1,470, which means ROA has a positive effect on stock returns. The coefficient regression value of 1,470 states that every increase or decrease of one amount in return on an asset will increase or decrease the stock return amounting to 1,470. The value of Sig. is 0,074 > 0,05, meaning that it is accepted that ROA has an insignificant influence on stock returns. The result is in contrast with Kusumah & Yudhanto (2020), Asikin et al. (2021), and Bakhtiar & Saryadi (2017) with a positive significant effect. Daniswara & Daryanto (2020) with an insignificant negative effect. While in line with Tri Putro & Kamil (2020) and Nalurita (2017) with an insignificant positive effect.

Based on Table 3.8 of the statistics test T result, the coefficient regression value from return on equity (ROE) has a negative amount of -0,055, which means ROE has a negative effect on stock returns. The coefficient regression value of -0,055 states that every increase or decrease of one amount in return on equity will increase or decrease the stock return amounting to -0,055. The value of Sig. is 0,665 > 0,05, meaning that it is accepted that ROE has an insignificant influence on stock returns. The result is in contrast with Siregar & Sihombing (2020), Mardiansyah & Suriawinata (2020), Santoso et al. (2020), and Bakhtiar & Saryadi (2017) with positive significant effect. Piralanasih & Mustafa (2018) insignificant positive effect.

ROA and ROE have no value as a predictor of stock return, particularly in the Heavy Construction and Civil Engineering industry. Due to market instability resulting from pandemic scenarios, the government's participation in recent years has resulted in specific projects being placed on hold and requiring enterprises to provide health measures and cut working time, hurting the company's entire income. As a result, investors in the Heavy Construction industry should not place a high value on a company's profitability ratios. According to Nalurita (2017), investors assume that the state of a company's stock will improve despite low profitability, which causes stock prices to rise.

Solvency and Stock Return (Rejected)

Based on Table 3.8 of the statistics test T result, the coefficient regression value from debt-to-equity ratio (DER) has a negative amount of -0,010, which means DER has a negative effect on stock returns. The coefficient regression value of -0,010 states that every increase or decrease of one amount in the debt-to-equity ratio will increase or decrease the stock return amounting to -0,010. The value of Sig. is 0,512 > 0,05, meaning that it is accepted that DER has an insignificant influence on stock returns. The result is in contrast with Siregar & Sihombing (2020), Piralanasih & Mustafa (2018), Medyawati & Yunanto (2017), and Nalurita (2017) with significant positive effects. Asikin et al. (2020), Santoso et al. (2020) with a significant negative effect. Bakhtiar & Saryadi

with insignificant positive effect. While in line with Kusumah & Yudhanto (2020), Mardiansyah & Suriawinata (2020), with an insignificant negative effect.

According to the data, DER had no relevance as a predictor of stock return in the Heavy Construction and Civil Engineering Industry. Some investors consider DER the corporation's obligation to manage its creditors' loans. As a result, the company will require significant operational funds that cannot be met only through the company's resources, according to Nalurita (2017). The resulting debt financing could lead to responsibility for future company development, affecting the firm stock's increase or drop. However, based on the findings, the stock return would be reduced.

Liquidity and Stock Return (Accepted)

Based on Table 3.8 of the statistics test T result, the coefficient regression value from the current ratio (CR) has a negative amount of -0,124, which means CR has a negative effect on stock returns. The coefficient regression value of -0,124 states that every increase or decrease of one amount in the current ratio will increase or decrease the stock return amounting to -0,124. The value of Sig. is $0,035 < 0,05$, meaning that it is accepted that CR has a significant influence on stock returns. The result is in contrast with Kusumah & Yudhanto (2020), Asikin et al. (2020), Piralanasih & Mustafa (2018), with insignificant positive effects. Medyawati & Yunanto (2017) with an insignificant negative effect. Mardiansyah & Suriawinata (2020), Santoso et al. (2020) with positive significant effect. Siregar & Sihombing (2020) with significant positive effect.

According to the data, CR has value as a predictor of stock return in the Heavy Construction and Civil Engineering Industry. Liquidity refers to a firm's capacity to meet short-term obligations, and this ratio is a feature that improves the likelihood of external parties providing loans to the company. Companies that could make good use of their assets will create more sales and profits. Although a company's financial situation may not always be favorable, it will seek loans from creditors to fund its operating activities when financial difficulties arise. However, investors should consider the company's corporate liquidity, as the CR has a significant negative effect on stock return, implying that paying short-term obligations in a year has a negative impact on the stock, as Heavy Construction and Civil Engineering companies tend to finish their projects more than one year typically.

Market and Stock Return (Accepted)

Based on Table 3.8 of the statistics test T result, the coefficient regression value from the price-earnings ratio (PER) has a positive amount of 0,001, which means PER has a positive effect on stock returns. The coefficient regression value of 0,001 states that every increase or decrease of one amount in the price-earnings ratio will increase or decrease the stock return amounting to 0,001. The value of Sig. is $0,036 < 0,05$, meaning that it is accepted that PER has a significant influence on stock returns. The result contrasts with Santoso et al. and Nalurita (2017) with an insignificant positive effect. While in line with Bakhtiar & Saryadi (2017) with significant positive effect.

In the Heavy Construction and Civil Engineering Industry, PER has value as a predictor of stock return. The greater its PER value, the higher the stock returns of companies in the heavy construction and civil engineering industries. This could happen because investors often place a premium on company profit growth, influencing investors' perceptions of stock returns. PER can be used as a reference in deciding investment strategy for investors that invest in capital markets, particularly for heavy construction and civil engineering business shares, because a higher PER suggests that earnings per share are likely to rise, reflecting its chances with higher growth rate.

CONCLUSION AND RECOMMENDATION

This research aims to analyze and find evidence regarding the effect of financial ratio which is ROA, ROE, DER, CR, and PER toward stock return. The population and sampling of this study is all companies listed on IDX from 2018 until 2020. There are 15 eligible companies from heavy construction and civil engineering sub-sector that have been selected as this research study sample. Stock return can be explained by 31.8% by its independent variables which is ROA, ROE, DER, CR, and PER. The rest 68.2% are explained by other variables, conditions, and reasons outside the conducted financial ratios

Based upon the statistical analysis and result of discussion explained from previous chapter, the research can be concluded as the following:

1. (H_0): ROA has insignificant and positive effect which affect the stock returns of heavy construction and civil engineering companies in the period of 2018 to 2020
2. (H_0): ROE has insignificant and negative effect which affect the stock returns of heavy construction and civil engineering companies in the period of 2018 to 2020
3. (H_0): DER has insignificant and negative effect which affect the stock returns of heavy construction and civil engineering companies in the period of 2018 to 2020
4. (H_1): CR has significant and negative effect which affect the stock returns of heavy construction and civil engineering companies in the period of 2018 to 2020
5. (H_1): PER has significant and positive effect which affect the stock returns of heavy construction and civil engineering companies in the period of 2018 to 2020
6. CR and PER have the strongest influence toward stock return under heavy construction and civil engineering companies for the year 2018 to 2020.
7. The following financial ratios of ROA, ROE, DER, CR, and PER influence the stock return at the same time for heavy construction and civil engineering companies from 2018 to 2020.

Based on the research result, among all the five independent variables, the current ratio has a negative effect, and the price-earnings ratio has a positive effect that significantly influences stock returns. In contrast, the remaining ROA, ROE, and DER do not significantly affect the stock return.

Investors still need to give appropriate attention and judgment based upon all selected financial ratios that can be used to make decisions. Furthermore, all vital financial ratios should still be considered as all independent variables simultaneously affect the stock return.

For the management and decision-maker, with the result of CR, which has a significant and negative effect on stock return, it should be a guidance in maintaining the short-term obligation of the company to be in an ideal shape. Heavy construction and civil engineering companies tend to have longer projects to finish than usual activities. So the company should also maintain a relationship with external parties for a more extended period.

On the other hand, PER has a significant effect on stock return, which can guide future investors. Higher PER indicates higher earnings per share and emphasizes the overall corporate profit and the company's growth.

Some Limitation occurs in which the sample data only contains the heavy construction and civil engineering companies from the overall infrastructure sector during three years. Future researchers are expected to analyze other variables that may affect stock returns, excluding the variables already conducted in this research. Based on the coefficients of determination, there are still 68.2% for other independent variables that can influence stock returns. At the same time, 31.8%, ROA, ROE, DER, CR, and PER, has explained the influence regarding the stock return. Future research could also broaden sample size and time, so more infrastructure sector companies can be explained.

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APPENDIX 1 Ratio Calculation Data

| No. | ROA | ROE | DER | CR | PER | SR | Ticker | Year |
|-----|--------|--------|--------|-------|--------|--------|--------|------|
| 1 | 0,002 | 0,015 | 5,263 | 1,097 | 59,53 | -0,368 | ACST | 2018 |
| 2 | -0,108 | -3,951 | 35,466 | 0,946 | -0,60 | -0,376 | ACST | 2019 |
| 3 | -0,439 | -4,136 | 8,428 | 0,844 | -0,79 | -0,546 | ACST | 2020 |
| 4 | 0,021 | 0,103 | 3,788 | 1,341 | 8,76 | -0,159 | ADHI | 2018 |
| 5 | 0,018 | 0,097 | 4,343 | 1,238 | 6,30 | -0,259 | ADHI | 2019 |
| 6 | 0,001 | 0,004 | 5,833 | 1,112 | 227,97 | 0,306 | ADHI | 2020 |
| 7 | 0,127 | 0,285 | 1,244 | 0,951 | 8,76 | 0,226 | BUKK | 2018 |
| 8 | 0,104 | 0,201 | 0,941 | 1,176 | 7,80 | -0,263 | BUKK | 2019 |
| 9 | 0,085 | 0,149 | 0,751 | 1,187 | 7,10 | -0,211 | BUKK | 2020 |
| 10 | 0,016 | 0,025 | 0,574 | 2,493 | 60,56 | -0,152 | IDPR | 2018 |
| 11 | -0,002 | -0,003 | 0,649 | 2,175 | -83,21 | -0,587 | IDPR | 2019 |
| 12 | -0,253 | -0,498 | 0,966 | 1,402 | -1,11 | -0,418 | IDPR | 2020 |
| 13 | 0,056 | 0,104 | 0,860 | 1,298 | 22,31 | -0,326 | JKON | 2018 |
| 14 | 0,041 | 0,075 | 0,827 | 1,358 | 40,95 | 0,374 | JKON | 2019 |
| 15 | 0,011 | 0,019 | 0,702 | 1,625 | 123,18 | -0,200 | JKON | 2020 |
| 16 | 0,052 | 0,098 | 0,866 | 2,071 | 8,04 | 0,016 | NRCA | 2018 |
| 17 | 0,041 | 0,083 | 1,017 | 1,936 | 9,37 | -0,005 | NRCA | 2019 |
| 18 | 0,025 | 0,048 | 0,926 | 2,057 | 16,43 | -0,016 | NRCA | 2020 |
| 19 | 0,064 | 0,078 | 0,224 | 4,286 | 25,02 | -0,597 | PBSA | 2018 |
| 20 | 0,018 | 0,025 | 0,344 | 3,045 | 77,35 | -0,007 | PBSA | 2019 |
| 21 | 0,061 | 0,081 | 0,310 | 3,228 | 20,70 | -0,150 | PBSA | 2020 |
| 22 | 0,039 | 0,138 | 2,221 | 1,415 | 7,46 | -0,316 | PTPP | 2018 |
| 23 | 0,019 | 0,070 | 2,739 | 1,308 | 12,01 | -0,122 | PTPP | 2019 |
| 24 | 0,005 | 0,019 | 2,818 | 1,212 | 88,81 | 0,177 | PTPP | 2020 |
| 25 | 0,063 | 0,194 | 2,069 | 1,373 | 9,15 | -0,152 | TOTL | 2018 |
| 26 | 0,059 | 0,163 | 1,751 | 1,423 | 8,46 | -0,221 | TOTL | 2019 |
| 27 | 0,038 | 0,095 | 1,536 | 1,491 | 11,59 | -0,151 | TOTL | 2020 |
| 28 | 0,012 | 0,020 | 0,689 | 1,701 | 61,73 | -0,029 | SSIA | 2018 |
| 29 | 0,017 | 0,030 | 0,807 | 2,368 | 33,00 | 0,310 | SSIA | 2019 |
| 30 | -0,010 | -0,018 | 0,802 | 1,613 | -30,10 | -0,122 | SSIA | 2020 |
| 31 | 0,035 | 0,120 | 2,441 | 1,542 | 8,57 | 0,068 | WIKA | 2018 |
| No. | ROA | ROE | DER | CR | PER | SR | Ticker | Year |

| | | | | | | | | |
|----|--------|--------|-------|-------|--------|--------|------|------|
| 32 | 0,042 | 0,136 | 2,232 | 1,395 | 7,81 | 0,202 | WIKA | 2019 |
| 33 | 0,005 | 0,019 | 3,089 | 1,086 | 95,85 | -0,003 | WIKA | 2020 |
| 34 | 0,037 | 0,160 | 3,306 | 1,179 | 5,75 | -0,240 | WSKT | 2018 |
| 35 | 0,008 | 0,035 | 3,210 | 1,089 | 21,49 | -0,116 | WSKT | 2019 |
| 36 | -0,090 | -0,573 | 5,369 | 0,675 | -2,65 | -0,030 | WSKT | 2020 |
| 37 | 0,069 | 0,152 | 1,205 | 1,792 | 9,94 | -0,236 | PPRE | 2018 |
| 38 | 0,057 | 0,139 | 1,454 | 1,323 | 7,50 | -0,245 | PPRE | 2019 |
| 39 | 0,017 | 0,041 | 1,426 | 1,297 | 43,67 | 0,092 | PPRE | 2020 |
| 40 | 0,001 | 0,002 | 1,465 | 1,459 | 902,17 | 0,159 | TOPS | 2018 |
| 41 | -0,070 | -0,163 | 0,133 | 2,482 | -46,63 | -0,675 | TOPS | 2019 |
| 42 | -0,058 | -0,160 | 1,779 | 2,001 | -12,50 | -0,815 | TOPS | 2020 |
| 43 | 0,075 | 0,208 | 1,757 | 1,831 | 5,17 | -0,118 | WEGE | 2018 |
| 44 | 0,074 | 0,186 | 1,520 | 1,664 | 6,48 | 0,275 | WEGE | 2019 |
| 45 | 0,026 | 0,071 | 1,771 | 1,486 | 15,99 | -0,163 | WEGE | 2020 |

APPENDIX 2 SPSS 25 OUTPUT DATA

1. Descriptive Statistics Results

| Variables | N | Minimum | Maximum | Mean | Standard Deviation |
|----------------------|----|---------|---------|----------|--------------------|
| Return on Assets | 45 | -0,439 | 0,127 | 0,00913 | 0,091720 |
| Return on Equity | 45 | -4,136 | 0,285 | -0,13364 | 0,866570 |
| Debt to Equity Ratio | 45 | 0,133 | 35,466 | 2,70913 | 5,276207 |
| Current Ratio | 45 | 0,675 | 4,286 | 1,62380 | 0,675073 |
| Price Earnings Ratio | 45 | -83,210 | 902,170 | 42,55867 | 139,181697 |
| Stock Returns | 45 | -0,815 | 0,374 | -0,13753 | 0,267055 |

2. Classical Assumption Tests

a. Normality Test Result

| | | Unstandardized Residual |
|--|----------------|-------------------------|
| N | | 45 |
| <i>Normal Parameters^{a,b}</i> | Mean | .0000000 |
| | Std. Deviation | .22055512 |
| Most Extreme Differences | Absolute | .063 |
| | Positive | .063 |
| | Negative | -.060 |
| Test Statistic | | .063 |
| Asymp. Sig. (2-tailed) | | .200 ^{c,d} |
| Test distribution is Normal | | |

b. Multicollinearity Test Results

| Independent Variable | VIF | Tolerance | Decision |
|----------------------|-------|-----------|-------------------------------|
| Return on Assets | 4,327 | 0,231 | There is no multicollinearity |
| Return on Equity | 9,579 | 0,104 | There is no multicollinearity |
| Debt to Equity Ratio | 4,692 | 0,213 | There is no multicollinearity |
| Current Ratio | 1,191 | 0,840 | There is no multicollinearity |
| Price Earnings Ratio | 1,013 | 0,987 | There is no multicollinearity |

c. Autocorrelation Test results

| N | k | d_L | d_U | $4 - d_L$ | $4 - d_U$ | d | Decision |
|----|---|--------|--------|-----------|-----------|-------|-----------------------------|
| 45 | 5 | 1,2874 | 1,7762 | 2,7126 | 2,2238 | 1,954 | There is no autocorrelation |

d. Heteroskedasticity Test Results

| Independent Variables | Significance | Decision |
|-----------------------|--------------|--------------------------------|
| Return on Assets | 0,998 | There is no heteroskedasticity |
| Return on Equity | 0,666 | There is no heteroskedasticity |
| Debt to Equity Ratio | 0,925 | There is no heteroskedasticity |
| Current Ratio | 0,394 | There is no heteroskedasticity |
| Price Earnings Ratio | 0,822 | There is no heteroskedasticity |

3. Hypothesis Tests

a. Coefficient of Determination Test Results

| Model | R | R Square | Adjusted R Square | Standard Error of the Estimate |
|---|-----------------------|----------|-------------------|--------------------------------|
| 1 | (0,564 ^a) | 0,318 | 0,230 | 0,234267 |
| a. Predictors: (Constant), ROA, ROE, DER, CR, PER | | | | |
| b. Dependent Variable: Stock Returns | | | | |

b. Statistics F Test Results

| (ANOVA ^a) | | | | | | |
|---|----------------|-------|-------------|-------|-------|--------------------|
| Model | Sum of Squares | df | Mean Square | F | Sig. | |
| 1 | Regression | 0,998 | 5 | 0,200 | 3,636 | 0,009 ^b |
| | Residual | 2,140 | 39 | 0,055 | | |
| | Total | 3,138 | 44 | | | |
| a. Dependent Variable: Stock Return | | | | | | |
| b. Predictors: (Constant), ROA, ROE, DER, CR, PER | | | | | | |

c. Statistics T Test Results

| (Coefficients ^a) | | | | | | |
|-------------------------------------|-----------------------------|------------|-------|--------------------------------|--------|-------|
| Model | Unstandardized Coefficients | | | Standardized Coefficients Beta | t | Sig. |
| | B | Std. Error | | | | |
| 1 | (Constant) | 0,046 | 0,110 | | 0,420 | 0,677 |
| | ROA | 1,470 | 0,801 | 0,505 | 1,835 | 0,074 |
| | ROE | -0,055 | 0,126 | -0,179 | -0,437 | 0,665 |
| | DER | -0,010 | 0,014 | -0,190 | -0,662 | 0,512 |
| | CR | -0,124 | 0,057 | -0,314 | -2,178 | 0,035 |
| | PER | 0,001 | 0,000 | 0,290 | 2,175 | 0,036 |
| a. Dependent Variable: Stock Return | | | | | | |

Mohammad Fathan Saleh
Sekolah Bisnis dan Manajemen, Institut Teknologi Bandung
Email: mohammad_saleh@sbm-itb.ac.id

Wiwiek Mardawiyah Daryanto
Sekolah Tinggi Manajemen IPMI
Email: wiwiek.daryanto@ipmi.ac.id