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# The effect of current ratio (CR), debt equity ratio (DER), and net profit margin (NPM) on stock price

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## ABSTRACT

During this pandemic there are many traders (people who invest in the short term or more actively monitor market prices), and retail investors (people who invest in the long term with small capital or passively monitor market prices and buy commodities). regularly either per day, week, or month with a small capital). This study uses the annual financial reports of three different infrastructure sector companies, namely, PT Jasa Marga Tbk, PT Waskita Karya (Persero) Tbk, and PT Bali Tower Indo Sentra Tbk and the data is taken from the Indonesia Stock Exchange on the website [www.idx.co.id](http://www.idx.co.id) with the aim of obtaining empirical evidence that can be tested using the causality method. Data analysis in this study was carried out using multiple linear regression. This test begins with descriptive statistical testing, then continues with classical assumption testing and ends with hypothesis testing. The program (software) used for data processing in this study is SPSS version 22. The results of the study partially prove that the Debt to Equity Ratio (DER) has a significant effect on stock prices in Infrastructure sector companies for the 2016-2020 period. The results of the study partially prove that Net Profit Margin (NPM) has no significant effect on stock prices in Infrastructure sector companies for the 2016-2020 period. The results simultaneously prove that the Debt to Equity Ratio (DER) and Net Profit Margin (NPM) have a significant effect on stock prices in Infrastructure sector companies for the 2016-2020 period.

**Keywords:** Current Ratio, Debt to Equity Ratio, Net Profit Margin, Stock Price

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## 1. INTRODUCTION

During the current COVID-19 pandemic, economic development conditions are very unstable. Plus the restrictions on employee work in order to control the pandemic that is engulfing the world, has made the company's performance at a low point. With the development of technological systems in the world, many people take advantage of this to reap profits by investing, either in cryptocurrencies, or the capital market. So that during this pandemic, there are many traders (people who invest in the short term or more actively monitor market prices), and retail investors (people who invest in the long term with small capital or passively monitor market prices and buy commodities). regularly either per day, week, or month with a small capital).

In this case, the capital market plays an important role in economic activity. Even the capital market can be used as a measure of economic conditions in a country. In this last period, the capital market has become a special attraction for the public

as an alternative in investing their funds. This can also be proven by the increasing number of trading activities in the capital market.

Investors to carry out investment activities in the capital market require careful considerations, so that information relevant to capital market conditions is something that capital market players always look for in making investment decisions. However, not all information received by investors is very valuable information, as a result, investors must choose appropriate information to be considered in making a decision.

The company's financial statements are one of the information in the capital market. From these financial reports, investors can find out internal information about the company's financial performance which is one of the factors seen by investors to make choices in buying shares. If the company's financial statements can provide information that is relevant to the strategies used by investors, investors can use this information to make the right decisions.

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In capital market activities, stock prices are one of the most important factors that must be considered by investors in carrying out investment activities, because stock prices show the achievements of an issuer. Usually the movement of stock prices is in line with the performance of an issuer. If an issuer has good performance, the profits generated from business operations will also be greater.

Therefore, every company is very concerned about the price of its shares before being published in the capital market. If the stock price is too low, investors will assume that the company's performance is not good, thereby reducing investor interest in buying its shares. But if the stock price is too high, it will reduce the ability of investors to buy their shares. As a result, the share price of an issuer will be difficult to increase again. In determining the share price of each company, management considerations are needed. Thus, it is necessary for the management to consider the liquidity and profitability factors that affect the stock price set by the company.

Companies with high liquidity will reduce their external funding because their internal funding sources are high. The higher the level of the company's ratio, the higher the company's liquidity position. The liquidity of a company will greatly affect the activities of the company. If the current ratio is low, it can be said that the company lacks capital to pay debts. However, if the results of the measurement of the ratio are high, it does not mean that the company's condition is good. This can happen because cash is not used as well as possible. Measurement of the liquidity ratio can use the current ratio (Current Ratio).

Current Ratio is the most common measure for companies to determine their ability to meet short-term obligations, because this ratio shows how far the demands of short-term creditors are met by assets that are estimated to be cash in the period. needed. Thus, it is necessary for the management to consider the liquidity and profitability factors that affect the stock price set by the company.

Current Ratio is the most common measure for companies to determine their ability to meet short-term obligations, because this ratio shows how far the demands of short-term creditors are met by assets that are estimated to be cash in the period.

The Debt to Equity Ratio (DER) reflects the company's ability to fulfill all of its obligations, which is indicated by how much of own capital used to pay debts. The Debt to Equity Ratio (DER) also provides a guarantee of how much the company's debt can be guaranteed with its own capital. Information about how much funds the company has can be used by creditors as a basis for determining the level of creditor security. The greater the value of the Debt to Equity Ratio (DER) of a company, it can be interpreted that the company's business capital structure makes more use of debt to equity. The greater the Debt to Equity Ratio

(DER) reflects the company's relatively high risk so that investors try to avoid stocks that have a high Debt to Equity Ratio (DER) value. If the company uses debt as capital, it will increase the risk borne by investors, thereby reducing investors' interest in buying their shares.

Net profit margin (NPM) can be interpreted as a ratio that compares a company's profit with the total amount of money it generates. It measures how effectively the company operates. For example, if a company has a 10% net profit margin, that means it keeps 2,000 for every 20,000 sales revenue. This ratio is used to provide analysis or an overview of the financial stability of a company. Companies that generate more profit per value from sales are more efficient. That efficiency can make companies more likely to survive when product lines don't meet expectations, or during periods of broader economic contraction, such as early February 2020 until now due to the pandemic.

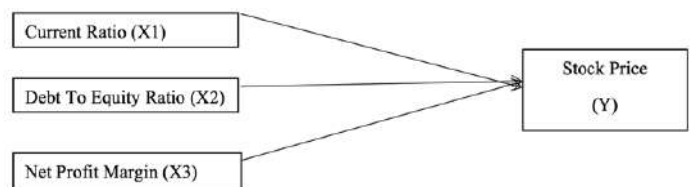


Figure 1. Conceptual Framework

### Hypothesis

The research hypotheses proposed in this study based on theoretical foundations, previous research, and theoretical frameworks are as follows:

- H1: It is suspected that the Current Ratio (CR) variable has a partial effect on stock prices in infrastructure sector companies on the Indonesia Stock Exchange for the period 2016 – 2020.
- H2: It is suspected that the Debt To Equity Ratio (DER) variable has a partial effect on stock prices in infrastructure sector companies on the Indonesia Stock Exchange for the period 2016 – 2020.
- H3: It is suspected that the Net Profit Margin (NPM) variable has a partial effect on stock prices in infrastructure sector companies on the Indonesia Stock Exchange for the period 2016 – 2020.
- H4: It is suspected that the variables Current Ratio (CR), Debt To Equity Ratio (DER), and Net Profit Margin (NPM) have a significant simultaneous effect on stock prices in infrastructure sector companies on the Indonesia Stock Exchange for the period 2016 – 2020.

## 2. METHODOLOGY

This study uses the annual financial reports of three different infrastructure sector companies, namely, PT Jasa Marga Tbk, PT Waskita Karya (Persero) Tbk, and PT Bali Tower Indo Sentra Tbk and the data is taken from the Indonesia Stock Exchange on the website [www.idx.co.id](http://www.idx.co.id) with the aim of obtaining empirical

evidence that can be tested using the causality method. After obtaining annual financial data from the three companies, this study also uses financial statements for the 2016-2020 period which aims to determine the effect of the independent variables, namely; Debt to Equity Ratio (DER), and Net Profit Margin (NPM) on the dependent variable, namely the stock price.

### Data Collection Method

In collecting data in this study, only the company's annual financial statements were used. The population elements selected as the sample of this study are companies that meet the following criteria:

- 1) Infrastructure sector companies on the Indonesia Stock Exchange for the period 2016 – 2020.
- 2) The company has complete data needed, namely financial statements which include statements of comprehensive income, statements of retained earnings, statements of changes in financial position and statements of cash flows.

With predetermined criteria, the researchers only used three companies that met the criteria as research samples, namely PT Jasa Marga Tbk, PT Waskita Karya (Persero) Tbk, PT Bali Tower Indo Sentra Tbk.

### Data Analysis Techniques

Data analysis in this study was carried out using multiple linear regression. This test begins with descriptive statistical testing, then continues with classical assumption testing and ends with hypothesis testing. The program (software) used for data processing in this study is SPSS version 22.0.

## 3. RESULT AND DISCUSSION

Histogram is a bar graph that serves to test (graphically) whether a data is normally distributed or not. If the data is normally distributed, then the data will form a kind of bell. If the graph looks far from a bell shape, it can be said that the data is not normally distributed.

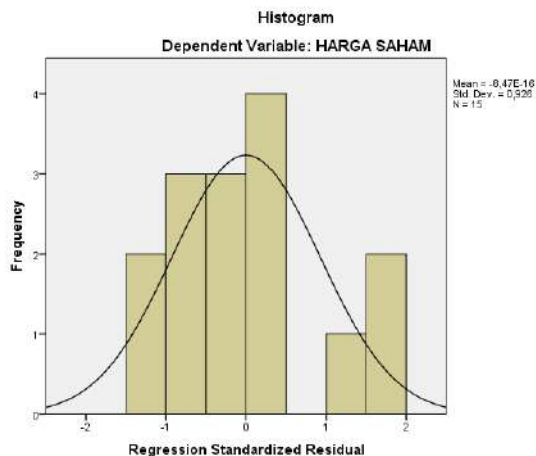


Figure 2. Histogram

The histogram graph in the image above shows a "normal" distribution pattern because the graph is neither skewed to the left nor skewed to the right. Similarly, the results of the normality test using a p-plot graph.

### P-plot Normal Test

The basis for making decisions is normal or not with a p-plot, which is as follows:

- 1) If the data spreads around the diagonal line and follows the direction of the diagonal line, then the regression model fulfills the assumption of normality.
- 2) If the data spreads away from the diagonal line and does not follow the direction of the diagonal line, then the regression model does not meet the assumption of normality.

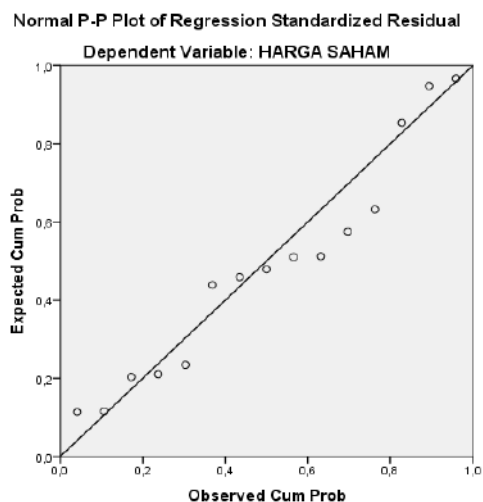


Figure 3. P-Plot

Based on the picture above, it can be seen that the results of the normality test show that the data spreads around the diagram and the points approach the diagonal line. So it can be concluded that the data processed is data that is distributed "normally" and the normality test is met.

The hypothesis test in this study uses multiple regression analysis, coefficient of determination test, t statistical test and F statistical test. Multiple Linear Regression is a linear regression model involving more than one independent variable or predictor. In English, this term is called multiple linear regression.

The regression equation aims to predict the size of the dependent variable by using the independent variable data which is known to be large (Suntoyo, 2009:11). The regression equation used is as follows:

$$Y_t = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + e$$

Where :

- Y : Dependent Variable (Stock Price)
- 0 : Constant
- X1 : Variable X1 (Debt to Equity Ratio)
- X2 : Variable X2 (Net Profit Margin)
- e : error term (Standard Error)

**Table 1. Coefficient**

| Model        | Unstandardized Coefficients |            | Standardized Coefficients | t      | Sig. |
|--------------|-----------------------------|------------|---------------------------|--------|------|
|              | B                           | Std. Error | Beta                      |        |      |
| 1 (Constant) | 1504,116                    | 197,600    |                           | 7,612  | ,000 |
| DER          | 11,357                      | 1,109      | ,946                      | 10,238 | ,000 |
| NPM          | 2,401                       | 9,237      | ,024                      | ,260   | ,799 |

From the data above, the multiple linear regression equation that can be formulated is as follows:

$$Y = 1504.116 + 11.357DER + 2.401NPM +$$

Description :

"The value of 0 = 1504.116 indicates that if the independent variables (DER and NPM) are constant (no change), then the stock price is 1504.116"

"The value of the regression coefficient X1 (DER) = 11.357 means that, if the other independent variables have a fixed value and DER increases by 1%, the Stock Price (Y) will increase by 11.357"

"The value of the regression coefficient X2 (NPM) = 2.401 means that, if the other independent variables have a fixed value and the NPM has increased by 1%, the Stock Price (Y) will increase by 2.401"

Simultaneous test (F test) is a test conducted to see whether all independent variables simultaneously affect or not on the dependent variable by comparing the value of Fcount with Ftable.

By using the hypothesis:

Ho: Simultaneously No Effect

Ha: Simultaneously Affected

If the value of f count < f table, it means that Ho is accepted, Ha is rejected

If the value of f count > f table, it means that Ho is rejected, Ha is accepted.

**Table 2. ANOVAa**

| Model        | Sum of Squares | Df | Mean Square  | F      | Sig.  |
|--------------|----------------|----|--------------|--------|-------|
| 1 Regression | 40069265,125   | 2  | 20034632,562 | 52,885 | ,000b |
| Residual     | 4545984,875    | 12 | 378832,073   |        |       |
| Total        | 44615250,000   | 14 |              |        |       |

To determine the f table, it is necessary to find the values of df1 and df2 by:

$$df1 = k - 1 = 2 - 1 = 1$$

$$df2 = n - k = 15 - 2 = 13, \text{ then the f table value is } 4.67$$

then the f test results can be obtained, as follows:

f count : 52.885

f table : 4.67

so that it can be concluded, f count (52.885) > f table (4.67) with a Sig value. 0.00 < 0.05, which means that the independent variable (X) simultaneously affects the dependent variable (Y).

### Discussion

The Effect of Debt to Equity Ratio (DER) on Stock Prices Based on the research results obtained regarding the effect of the Debt to Equity Ratio on stock prices in infrastructure sector companies listed on the Indonesia Stock Exchange. The results of the partial hypothesis test show that the calculated t value for the Debt to Equity Ratio variable is 10.238 > t table of 1.78229 meaning Ho is rejected and Ha is accepted (DER has a partial effect on stock prices in the 2016-2020 period). This is in line with research conducted by Pratama and Erawati (2014) which states that the Debt to Equity Ratio has a significant effect on stock prices. Nuryana (2013) which states that the Debt to Equity Ratio has a significant effect on stock prices. And Asmirantho and Yuliawati (2015) which state that the Debt to Equity Ratio has a significant effect on stock prices and the results of this study are not in line with the research of Takarini and Hendrarini (2011) and Wangarry, et al (2015) which state that the Debt to Equity Ratio has no effect and is not significant on stock prices. And Suhady (2009) which states that the Debt to Equity Ratio has no effect and is not significant on stock prices, and Nita Insyiraah (2019) which states that the Debt to Equity Ratio has no effect on stock prices and is not significant on stock prices. Based on the research that the researchers have done, both in theory, opinion, and previous research, it can be concluded that there is a significant or partial influence between DER on stock prices in infrastructure sector companies for the 2016-2020 period.

### Effect of Net Profit Margin (NPM) on Stock Prices

To find out there is a significant relationship between Net Profit Margin individually (partial) on stock prices in infrastructure sector companies listed on the Indonesia Stock Exchange. The results of the partial hypothesis test show that the t value for the variable (0.260) < t table (1.78229) with a value of Sig. 0.799 > 0.05, meaning Ho is accepted and Ha is rejected (NPM has no partial effect on stock prices in the 2016-2020 period). The reason why NPM does not have a partial effect on stock prices in infrastructure sector companies is clear, with the small profits that companies generate annually plus investing (buying their shares) in the infrastructure sector does not provide direct benefits or have a major impact on investors. This is in line with research conducted by Feri (2014) which states that Net Profit Margin has no significant effect on stock prices. Tyas and Saputra (2016) who stated that Net Profit Margin had no significant effect on stock prices, and Sha (2015) which stated that Net Profit Margin had no significant effect on stock prices. While this study is not in line with the research of Manopo, et al (2017), which states that Net Profit Margin partially has a positive and significant effect on stock prices, research by Egam, et al (2017) which states that Net Profit Margin has a significant and positive effect on stock prices and research conducted by Nita Insyiraah (2019) which states that Net Profit Margin has a significant effect on stock prices. With the results of research that has been carried out both in theory, opinion, and previous research, the researchers conclude that there is a match between research with theory or opinion with previous research, which states that NPM does not have a significant or partial effect on stock prices in infrastructure sector companies in the period 2016-2020.



#### *Effect of Debt to Equity Ratio (DER) and Net Profit Margin (NPM) on Stock Price*

Based on the F test that tests simultaneously, namely whether the two independent variables on the dependent variable, namely Debt to Equity Ratio (DER) and Net Profit Margin (NPM) have a simultaneous effect on stock prices, with the value of  $f$  arithmetic (52.885) >  $f$  table (4.67) with the level of Sig. of 0.000 < 0.05, which means that the independent variable (X) simultaneously affects the dependent variable (Y). This is also evidenced by the results of the Coefficient of Determination test (R test) that the R-Square (R<sup>2</sup>) value is 0.898 or 89.8%, meaning "that the independent variable (Debt to Equity Ratio and Net Profit Margin) affects the dependent variable (Stock Price) of 89.8% while the remaining 10.2% was influenced by other factors not included in the study. The results of this study are in line with the research results of Asmirantho and Yuliawati (2015) that Net Profit Margin (NPM) and Debt to Equity Ratio (DER) have a significant effect simultaneously on stock prices, Wangarry, et al (2015) which state that they have a significant effect simultaneously on stock prices, and Nita Insyiraah (2019) which states the results simultaneously show that Net Profit Margin and Debt to Equity Ratio have a significant effect on stock prices. While the results of this study are not in line with Tyas and Saputra (2016) which states that Net Profit Margin (NPM) and Debt to Equity Ratio (DER) does not have a significant effect simultaneously to stock prices. Based on the research that the author has done, both theories, opinions, and previous studies that have been stated above regarding the effect of DER and NPM simultaneously show that there is a strong influence on stock prices. So it can be concluded that there is a match between the results of research and theories, opinions and previous research, namely the simultaneous influence of DER and NPM on stock prices in infrastructure sector companies listed on the IDX for the 2016-2020 period.

#### **4. CONCLUSION**

Based on the results of the research and discussion that have been stated previously, it can be concluded from research on the effect of Debt to Equity Ratio (DER) and Net Profit Margin (NPM) on stock prices in infrastructure sector companies listed on the Indonesia Stock Exchange for the 2016-2020 period with a sample of 3 large companies in their field are as follows: The results of the study partially prove that the Debt to Equity Ratio (DER) has a significant effect on stock prices in Infrastructure sector companies for the 2016-2020 period. The results of the study partially prove that Net Profit Margin (NPM) has no significant effect on stock prices in Infrastructure sector companies for the 2016-2020 period.

The results simultaneously prove that the Debt to Equity Ratio (DER) and Net Profit Margin (NPM) have a significant effect on stock prices in Infrastructure sector companies for the 2016-2020 period.

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