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# FACTORS AFFECTING FIRM VALUE AND STOCK RETURNS ON THE COMPANY OF INFOBANK15 

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#### Abstract

The company value reflects the company in the eyes of investors, the company value as measured by the PBV (Price to Book Value) ratio is the company value which is reflected in the stock market price compared to its book value, the higher the market price compared to the book value, the higher the company value. Indirectly, it will also affect a company's stock return. Return is the main goal for investors in investing. The greater the return obtained, the greater the investor's motivation to invest, and of course the risks are high. This study aims to determine the significant effect of the value of Debt to Equity Ratio (DER), Return on Equity (ROE), company size, exchange rates, and interest rates partially affect firm value (PBV) and stock returns, both directly and indirectly, as well as the total impact. The sample used in this study were banking companies listed on the INFOBANK15 index with an observation period of 2015 to 2019, and a total of 9 companies were obtained based on the purposive sampling technique. Data were analyzed using the IMB SPSS Statistic 24.0 application. The results of this study indicate that: (1) Return on Equity and firm size have a positive and significant effect on firm value, while the Debt to equity ratio, exchange rates, and interest rates have a negative and insignificant effect on firm value. (2) Return on Equity has a positive and significant effect on stock returns, firm size variables, exchange rates, and interest rates have a positive but insignificant effect, while the Debt to Equity ratio has a negative and insignificant effect on stock returns. (3) The firm value variable has a positive but insignificant effect on stock returns.


Keywords: Stock Return, Firm Value, Debt to Equity Ratio, Return On Equity, Company Size, Exchange Rate, And Interest Rate

## INTRODUCTION

Getting a return is the main goal for investors. Return is the rate of return that can be either a gain or loss from the investment. This is due to an increase or decrease in the value of the investment they have invested. According to Eduardus in Zulfa (2013), return is one of the factors that motivates investors to invest, this is also a reward for their courage in taking on the risks involved in the investment made.

However, the movement of the average return on banking shares listed on the INFOBANK15 index from year to year which was obtained by shareholders fluctuated. The ups and downs of stock returns are an interesting phenomenon to discuss. In making investment decisions, investors need accurate information to investigate the company's performance, namely by analyzing the company's financial statements based on its financial ratios, as well as several other external factors.

Financial ratios are a benchmark and can also help investors in making investment decisions, namely, the solvency ratio presented as Debt to Equity Ratio (DER) to measure the level of sources of funds managed by the company and to measure how much the company can meet its obligations. Furthermore, the profitability ratio (Return on Equity) is a ratio used to describe the company's ability to generate profits through existing resources. Apart from these ratios, company size also affects investors' decision making in investing. Company size can be measured by looking at the total assets owned by the company. The value of the company also does not escape investors' judgment in determining investment. This is due to the increasing share price of the company, it can be concluded that the company has good performance and have an effect on the return of profits (stock returns) that will be obtained by investors, indirectly.

Apart from the health factor or financial condition in the company internally, other factors that can be used as benchmarks for investors to invest are the external factors of the company, which are global in nature regarding the economy. And each party never knows for sure these conditions. These factors are the exchange rate/exchange rate, and also interest rates. Based on the explanation above, this study aims to determine the relationship between debt to equity ratio, return on equity, total assets, exchange rates, interest rates on stock returns, and firm value as an intervention variable. The results of this study provide input/views for investors to see the financial aspects of the company in investing and also for beginners or potential investors to see what factors can be used as benchmarks for making decisions in investing.

## LITERATURE REVIEW

## Signaling Theory

Signaling theory or signal theory explains how investors have information with company management on the company's prospects. This theory is basically based on the assumption that the information held by each party is not the same. This theory deals with information asymmetry, which indicates that there is a different information between management and the parties that have an interest to the company.

## Agency Theory

Agency theory describes the relationship between shareholders as the principal and management as the agent. Management is a party contracted by shareholders to work for the interests of shareholders. Because they are elected, the management must account for all of its work to the shareholders.

## Framework

The framework of this research is a description of the research concept in understanding the research variables which are analyzed and studied according to the effect of the variable Debt to Equity Ratio, return on equity, company size, exchange rates and interest rates on stock returns and firm value as an intervening variable. Here's a conceptual model:


Figure 1: The Conceptual Model

## Hypothesis

Here is a hypothesis based on the previous framework:
H1 : Debt to Equity Ratio has a positive and significant effect on firm value
H2 : Return on Equity has a positive and significant effect on firm value
H3 : Company size has a positive and significant effect on firm value
H4 : Exchange rate has a positive and significant effect on firm value
H5 : Interest rates have a positive and significant effect on firm value
H6 : Interest rates have a positive and significant effect on stock returns
H7 : Debt to Equity Ratio has a positive and significant effect on stock returns
H8 : Return On Equity has a positive and significant effect on stock returns.
H9 : Firm Size has a positive and significant effect on stock returns
H 10 : Exchange rate has a positive and significant effect on stock returns
H11 : Firm value has a positive and significant effect on stock returns

## RESEARCH METHODS

In this study the authors used a qualitative descriptive study, namely analyzing a financial condition or event of a banking company on the Indonesian stock exchange.

## POPULATION AND SAMPLES

The population in this research was companies listed in the INFOBANK15 index during the observation period 2015 to 2019. The total population in this study were 15 companies. The data analysis technique used was purposive sampling. The criteria used are:

1. Banking companies listed in the INFOBANK15 Index for the period 2015-2019
2. Banking Companies that present complete annual financial reports during the observation period.
3. Banking companies that have never been delisted during the observation period.

Table 1: Sample Criteria

| THE CRITERIA | TOTAL |
| :--- | :---: |
| Total banking companies in the INFOBANK15 index 2015-2019 <br> 15 | 15 |
| Banking companies that have been delisted and have not <br> distributed dividends | (6) |
| Final sample | 9 |
| Observations for 5 years (2015-2019) | 45 |

## Research methods

Hypothesis testing in this study was carried out using the panel data regression analysis method to examine the relationship between one variable and another. Based on the conceptual model (figure1) and the regression analysis method, the equation in the simultaneous model is as follows:

$$
\begin{aligned}
& Y 1=f(X 1+X 2+X 3+X 4+X 5) \\
& Y 2=f(X 1+X 2+X 3+X 4+X 5+Y 1)
\end{aligned}
$$

Panel data is a combination of cross-section data and time-series data, where the same cross-section unit is measured at different times. The formula in this equation model is as follows:

$$
\begin{aligned}
& Y 1=p y 1 x 1 X 1+p y 1 \times 2 X 2+p y 1 x 3 X 3+p y 1 x 4 X 4+p y 1 \times 5 X 5+p y 1 x 1 \varepsilon 1 \\
& Y 2=p y 2 x 1 X 1+p y 2 x 2 X 2+p y 2 x 3 X 3+p y 2 x 4 X 4+p y 2 x 5 X 5+p y 2 x 6 X 6+p y 2 \varepsilon 2 \varepsilon 2
\end{aligned}
$$

## RESEARCH RESULTS AND DISCUSSION

 Population and Sample DescriptionIn this study, the data used are secondary, in the form of financial reports. The financial report data used is the company's financial statement data in the banking sector on the Indonesia Stock Exchange which is included in the INFOBANK 15 index and has never been delisted during the observation period, namely 2015-2019. The number of companies listed on the INFOBANK15 index was 15 companies from 2015 to 2019. However, in this study, only 9 companies met the criteria as the research sample using purposive sampling.

Table 2. List of companies that are the research samples.

| No | Bank Code | Bank Listed on IDX |
| :---: | :---: | :--- |
| 1 | BBCA | Bank Central Asia Tbk. |
| 2 | BBNI | Bank Negara Indonesia (Persero) Tbk |
| 3 | BBRI | Bank Rakyat Indonesia (Persero) Tbk |
| 4 | BBTN | Bank Tabungan Negara (Persero) Tbk |
| 5 | BDMN | Bank Danamon Indonesia Tbk. |
| 6 | BJBR | Bank Pembangunan Daerah Jawa B |
| 7 | BJTM | Bank Pembangunan Daerah Jawa T |
| 8 | BMRI | Bank Mandiri (Persero) Tbk. |
| 9 | PNBN | Bank Pan Indonesia Tbk |

## Descriptive Statistic

Descriptive statistics are used to determine the developments that occur in the variables in the study by displaying data descriptively, where the variables used in this study are Debt to Equity Ratio (DER), Return on Equity (ROE), Return on Assets (ROA), Exchange Rates (ER), Interest Rates (IR), firm value (PBV), and Stock Returns
$(S R)$. In this research, the descriptive analysis listed is the average value (mean), standard deviation, and the amount of observed data.

Table 3. Descriptive Statistics

| Descriptive Statistics | DER <br> $\mathbf{( X 1 )}$ | ROE <br> $\mathbf{( X 2 )}$ | TA <br> $\mathbf{( X 3 )}$ | ER <br> $\mathbf{( X 4 )}$ | IR <br> $\mathbf{( X 5 )}$ | PBV <br> (Y1) | SR <br> (Y2) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Minimum | 0.06 | 1.07 | 17.57 | 13.43 | 4.25 | 0.54 | $(-0.02)$ |
| Maximum | 12.07 | 22.46 | 21.07 | 14.48 | 7.75 | 4.79 | 0.39 |
| Mean | 5.88 | 11.97 | 19.56 | 13.83 | 5.85 | 1.85 | 0.01 |
| Deviation Standard | 2.47 | 4.57 | 1.05 | 0.37 | 1.85 | 1.02 | 0.01 |
| Observation | 45 | 45 | 45 | 45 | 45 | 45 | 45 |

Based on the table above, the variables used in the study can be described as follows:
Debt to Equity Ratio (DER). The results of the descriptive analysis show that during the observation period, the lowest value in the DER variable was 0.06 obtained from the data of Bank Pan Indonesia Tbk and the highest value for the DER variable was obtained from the data of Bank Tabungan Negara (Persero) Tbk. The DER variable has an average (mean) value of 5.88, where the value is greater than the Standard Deviation value, which is 2.47 . From these data, it shows that the banking companies in the sample have debt or funds from third parties that are larger in number than their own capital.

Return on Equity (ROE), the results of the descriptive analysis show that during the study period, the lowest value of the ROE variable was 1.07 which was obtained from the data of the Bank of West Java, while the highest value in the ROE variable was obtained from the data of Bank Rakyat Indonesia (Persero) Tbk with a value of 22.46. The ROE variable has an average value of 11.97 and a standard deviation value of 4.57 . These data indicate that the companies in the study sample have a fairly high return on equity.

Firm Size / Total Asset (TA), the results of the descriptive analysis show that during the study period, the lowest value of the TA variable was 17.57 which was obtained from the data of the Bank of East Java, while the highest value of the TA variable was obtained from data from Bank Rakyat Indonesia (Persero) Tbk with a value of 21.07. The TA variable has an average value of 19.56 and a standard deviation of 1.05. These data indicate that the companies in the study sample have substantial asset resources.

Exchange Rate (ER). The results of the descriptive analysis show that during the study period, the lowest value of the exchange rate variable was 13.43 , while the highest value of the exchange rate variable was 14.48 . The exchange rate variable has an average (mean) value of 13.83 and a standard deviation value of 0.37 . This data shows that the exchange rate variable during the observation period from 2015 to 2019 has fluctuated.

Interest Rates (IR) The results of the descriptive analysis show that during the study period it was seen that the lowest value of the interest rate variable was 4.25 , while the highest value of the interest rate variable was 7.75 . The interest rate variable has an average value of 5.85 and a standard deviation value of 1.85 . The data shows that the interest rate from 2015 to 2019 is around 5.00\%.

Firm Value (PBV). The results of the descriptive analysis show that during the study period it was seen that the lowest value of the firm value variable was 0.54 obtained from the data of Bank Pan Indonesia Tbk, while the highest value of the firm value was 4.79 which was obtained from the data of Bank Central Asia Tbk. The firm value variable has an average value of 1.85 and a standard deviation of 1.02 . These data illustrate that the companies in the sample have fairly good firm values.

Stock Return (SR) from the descriptive analysis data shows that during the study period, the lowest value of the stock return variable was -0.02 , the data obtained from Bank Negara Indonesia (Persero) Tbk, while the highest value of the stock return variable of 0.39 was obtained from the data of Bank Rakyat Indonesia Tbk. The stock return variable has an average value and the standard deviation value is the same, namely 0.01 . These data show
that the stock return variable in the companies in the sample has a stock return value that tends to fluctuate from 2015 to 2019.

## Classic assumption test

1) Normality Test (Figure 2)

Based on the results of the normality test in Figure 2 above, that the two variables are plotting data (dots) that describe the actual data following the diagonal line. Thus the variables are normally distributed, so that the assumption of normality is fulfilled.

Normal P-P Plot of Regression Standardized Residual


Normal P-P Plot of Regression Standardized Residual

2) Multicollinearity Test

Based on the table below, it can be concluded that there is no Multicollinearity.
Table 4. Multicollinearity Test Results

| Criteria | Value Used |  |  | Interpretation |
| :---: | :---: | :---: | :---: | :---: |
| Price to Book Value |  |  |  |  |
| $\begin{gathered} \text { Tolerance >0,10 } \\ \text { VIF }<10.00 \end{gathered}$ | Variable | Tolerance | VIF | No Multicollinearity Occurs |
|  | X1 | 0.817 | 1.223 |  |
|  | X2 | 0.736 | 1.359 |  |
|  | X3 | 0.812 | 1.232 |  |
|  | X4 | 0.661 | 1.513 |  |
|  | X5 | 0.662 | 1.511 |  |
| Stock Return |  |  |  |  |
| $\begin{gathered} \text { Tolerance >0,10 } \\ \text { VIF }<10.00 \end{gathered}$ | Variable | Tolerance | VIF | No Multicollinearity Occurs |
|  | X1 | 0.772 | 1.295 |  |
|  | X2 | 0.592 | 1.689 |  |
|  | X3 | 0.738 | 1.355 |  |
|  | X4 | 0.658 | 1.519 |  |
|  | X5 | 0.633 | 1.579 |  |
|  | Y1 | 0.607 | 1.647 |  |

3) Heteroscedasticity test (Figure 3)

The heteroscedasticity test does not occur if there is no clear pattern (wavy, widened, or narrowed) in the scatterplots image, and the points spread above and below the 0 (zero) number on the $Y$-axis.


Based on the Durbin Watson table with a significant 5\%, the DW value is obtained at $Y 1=0.903$ and $Y 2=2.304$. It is known that the number of independent variables in this study is 5 , then (" $k$ " $=5$ ), while the number of research samples is 9 samples, then (" $\mathrm{N} "=9$ ). The results of data analysis showed that there was no autocorrelation.

The calculation of the autocorrelation test is as follows:
Then:

Result:

$$
\begin{aligned}
& =d U<d w(Y 1)<4-d U \mid=d U<d w(Y 2)<4-d U \\
& =0<0.903<4-0=0<2.304<4-0 \\
& =0<0.903<4 \\
& =0<2.304<4
\end{aligned}
$$

## Panel Data Regression Results

Testing statistical criteria involves a measure of the suitability of the model used (goodness of fit), and significant testing, partially (t-test), simultaneous testing (F test), and coefficient (R2).

## Determinant Coefficient (R2)

The error value needs to be calculated to complete the model. The amount of contribution $\mathrm{X} 1, \mathrm{X} 2, \mathrm{X} 3, \mathrm{X} 4$. X 5 to Y 1 simultaneously is $39.3 \%(0.393)$, and the rest is influenced by other factors $60.7 \%$. While the value of e1 = $\mathrm{V} 1-0.393=0.779$. The amount of contribution $\mathrm{X} 1, \mathrm{X} 2, \mathrm{X} 3, \mathrm{X} 4 . \mathrm{X} 5$ and Y 1 to Y 2 simultaneously are $18.7 \%$ ( 0.187 ), and the rest is influenced by other factors $81.3 \%$. While the value of $\mathrm{e} 2=\mathrm{v} 1-0.187=0.901$.

## Simultaneously (F-test)

Table 5. F-test result

| ANOVA ${ }^{\text {a }}$ |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Model |  | Sum of Squares | df | Mean Square | F | Sig. |
| 1 | Regression | 0.029 | 6 | 0.005 | 1.455 | . $220{ }^{\text {b }}$ |
|  | Residual | 0.127 | 38 | 0.003 |  |  |
|  | Total | 0.156 | 44 |  |  |  |
| Model |  | Sum of Squares | df | Mean Square | F | Sig. |


| Regression | 18.139 | 5 | 3.628 | 5.050 | $.001^{\text {b }}$ |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Residual | 28.014 | 39 | 0.718 |  |  |
| Total | 46.153 | 44 |  |  |  |

Based on the results of the panel data analysis regression estimation, it can be seen in the table above that the probability value of F -statistic for Y 1 is 0.001 (smaller than $a$ ), it can be concluded that the independent variables, namely DER, ROE, company size (TA), exchange rate, and Interest rates jointly affect the firm value variable (PBV). Whereas at Y2, the probability value of F-statistic for Y2 is 0.220 (greater than a), so it can be concluded that the independent variables are DER, ROE, total assets (TA), exchange rates, interest rates, and firm value intervening variables (PBV). collectively does not affect stock returns.

## Partial (T-test)

|  | Unstandardized <br> Coefficients |  | Standardized <br> Coefficients |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | B | Std. <br> Error | Beta | t | Sig. |
| (Constant) | -0.315 | 0.446 |  | -0.706 | 0.484 |
| DER (X1) | -0.003 | 0.004 | -0.109 | -0.682 | 0.499 |
| ROE (X2) | 0.005 | 0.002 | 0.395 | 2.349 | 0.024 |
| TA (X3) | 0.004 | 0.009 | 0.064 | 0.401 | 0.690 |
| EXCHANGE RATE (X4) | 0.012 | 0.028 | 0.076 | 0.429 | 0.671 |
| INTEREST RATE (X5) | 0.007 | 0.007 | 0.174 | 0.982 | 0.332 |
| (Constant) | -1.079 | 6.635 |  | -0.163 | 0.872 |
| DER (X1) | -0.087 | 0.057 | -0.209 | -1.511 | 0.139 |
| ROE (X2) | 0.100 | 0.033 | 0.447 | 3.074 | 0.004 |
| TA (X3) | 0.268 | 0.135 | 0.274 | 1.976 | 0.055 |
| EXCHANGE RATE (X4) | -0.157 | 0.424 | -0.057 | -0.372 | 0.712 |
| INTEREST RATE (X5) | -0.140 | 0.106 | -0.204 | -1.329 | 0.192 |
| PBV | 0.011 | 0.009 | 0.195 | 1.305 | 0.199 |

Sources: Data analyzed by using IMB SPSS Statistic 23 application.
Based on the picture frame of mind, the equation model is as follows:

$$
\begin{aligned}
& Y 1=p y 1 \times 1 X 1+p y 1 \times 2 X 2+p y 1 \times 3 X 3+p y 1 \times 4 X 4+p y 1 \times 5 X 5+p y 1 \times 1 \varepsilon 1 \\
& Y 2=p y 2 \times 1 X 1+p y 2 \times 2 X 2+p y 2 \times 3 X 3+p y 2 \times 4 X 4+p y 2 x 5 X 5+p y 2 \times 6 X 6+p y 2 \varepsilon 2 \varepsilon 2
\end{aligned}
$$

Based on the results of the table above, the model equation is as follows:

$$
\begin{aligned}
& Y 1=(-1.079)+(-0.087) X 1+0.100 X 2+0.268 X 3+(-0.157) X 4+(-0.140) X 5+0.779 \varepsilon 1 \\
& Y 2=(-0.315)+(-0.003) X 1+0.005 X 2+0.004 X 3+0.012 X 4+0.007 X 5+(-3.741) X 6+0.901 \varepsilon 1
\end{aligned}
$$

1) A constant of ( -1.079 ) states that if the value of the independent variable is considered zero $(X 1, X 2, X 3, X 4, X 5=$ 0 ) then the firm value (PBV) is (-1.079). The error term of the firm value is 0.779 . The appearance of e (error term) in this equation is an affirmation that many independent variables affect the dependent variable ( Y ). Because in this model what you want to see is the effect of only one independent variable ( X ), then the others are considered to be fixed or ceteris paribus.
2) A constant of -0.315 states that if the value of the independent variable is considered zero ( $X 1, X 2, X 3, X 4, X 5=$ 0 ) then the stock return is -0.315 . The error term of the firm value is 0.901 . The appearance of e (error term) in this equation is an affirmation that many independent variables affect the dependent variable ( Y ). Because in this model what you want to see is the effect of one independent variable ( X ) only, then the others are considered to be fixed or ceteris paribus.

Thus based on the results of the t-test, an image of the research analysis model can be made as follows:


Sources: Data analyzed by using IMB SPSS Statistic 23 application.
The t-test aims to test the effect of the independent variable on the dependent variable individually by looking at the probability value. The level of confidence used by the researcher was $a=0.05$. The results of the analysis are shown in table below:

| Direct Effect |  |  |  |
| :---: | :---: | :---: | :---: |
| Variable Coefficient <br> Regression | t-statistics | Sig. | Description |
| X1 $\rightarrow$ Y1 -0.209 | -1.511 | 0.139 | Not Significant |
|   <br> $\mathrm{X} 2 \rightarrow \mathrm{Y} 1$ 0.447 | 3.074 | 0.004 | (+)Significant |
| $\mathrm{X} 3 \rightarrow \mathrm{Y} 1$ | 1.976 | 0.055 | (+) Significant |
| $\mathrm{X} 4 \rightarrow \mathrm{Y} 1$ -0.057 <br> $\mathrm{X} 5 \rightarrow$ Y1 -0.204 | -0.372 | 0.712 | Not Significant |
| $\mathrm{X} 5 \rightarrow \mathrm{Y} 1$ -0.204 | -1.329 | 0.192 | Not Significant |
| $\mathrm{X} 1 \rightarrow \mathrm{Y} 2$ -0.109 | -0.682 | 0.499 | Not Significant |
| $\mathrm{X} 2 \rightarrow \mathrm{Y} 2$ | 2.349 | 0.024 | (+) Significant |
| $\mathrm{X} 3 \rightarrow \mathrm{Y} 2$ <br> $\mathrm{X} 2 \rightarrow \mathrm{Y} 2$ | 0.401 | 0.690 | Not Significant |
| $\mathrm{X} 4 \rightarrow \mathrm{Y} 2$ | 0.429 | 0.671 | Not Significant |
| X5 $\rightarrow$ Y2 $\quad 0.174$ | 0.982 | 0.332 | Not Significant |
| Y1 $\rightarrow$ Y2 0.195 | 1.305 | 0.199 | Not Significant |
| Indirect Effect |  |  |  |
| Relation Between Variable | Value of Coef | ent Regression | Description |
| $\mathrm{X} 1 \rightarrow \mathrm{Y} 1 \rightarrow \mathrm{Y} 2$ | (0.209) | 0.195 | 0.040 |
| $\mathrm{X} 2 \rightarrow \mathrm{Y} 1 \rightarrow \mathrm{Y} 2$ | 0.447 | 0.195 | 0.087 |
| $\mathrm{X} 3 \rightarrow \mathrm{Y} 1 \rightarrow \mathrm{Y} 2$ | 0.274 | 0.195 | 0.053 |
| $\mathrm{X} 4 \rightarrow \mathrm{Y} 1 \rightarrow \mathrm{Y} 2$ | (0.057) | 0.195 | 0.011 |
| $\mathrm{X} 5 \rightarrow \mathrm{Y} 1 \rightarrow \mathrm{Y} 2$ | (0.204) | 0.195 | 0.039 |
|  |  |  |  |
| Total Effect |  |  |  |
| Relation Between Variable | Direct Effect | Indirect Effect | Total Effect |
| $\mathrm{X} 1, \mathrm{X} 1 \rightarrow \mathrm{Y} 1 \rightarrow \mathrm{Y} 2$ | -0.209 | 0.040 | -0.169 |
| $\mathrm{X} 2, \mathrm{X} 2 \rightarrow \mathrm{Y} 1 \rightarrow \mathrm{Y} 2$ | 0.447 | 0.087 | 0.534 |
| $\mathrm{X} 3, \mathrm{X} 3 \rightarrow \mathrm{Y} 1 \rightarrow \mathrm{Y} 2$ | 0.274 | 0.053 | 0.327 |
| $\mathrm{X} 4, \mathrm{X} 4 \rightarrow \mathrm{Y} 1 \rightarrow \mathrm{Y} 2$ | -0.057 | 0.011 | -0.046 |
| $\mathrm{X} 5, \mathrm{X} 5 \rightarrow \mathrm{Y} 1 \rightarrow \mathrm{Y} 2$ | -0.204 | 0.039 | -0.165 |

## Path Analysis

Based on the table above, the total effect between variables for $\mathrm{X} 1, \mathrm{X} 2, \mathrm{X} 3, \mathrm{X} 4, \mathrm{X} 5$ on Y 2 through Y 1 is known as follows:

1) Debt to Equity Ratio (X1) to stock returns (Y2) through firm value (Y1)

The formula for the value of the indirect effect is $\mathrm{X} 1 \rightarrow \mathrm{Y} 1 \rightarrow \mathrm{Y} 2=(\mathrm{pY} 1 \mathrm{X} 1$ ) ( p Y 1 Y 2 ) then $\mathrm{X} 1 \rightarrow \mathrm{Y} 1 \rightarrow \mathrm{Y} 2=$ $(0.209) \times 0.195=0.040$. The value of the company as an intervening has an indirect effect value of 0.040 , where the value is greater than the direct effect value, which is $(-0.209)$. These results indicate that the Debt to Equity Ratio has a greater indirect relationship to stock returns.

## 2) Return on Equity (X2) to stock returns (Y2) through firm value (Y1)

The formula for the value of the indirect effect is $\mathrm{X} 2 \rightarrow \mathrm{Y} 1 \rightarrow \mathrm{Y} 2=(\mathrm{pY} 1 \mathrm{X} 2$ ) ( p Y 1 Y 2 ) then $\mathrm{X} 2 \rightarrow \mathrm{Y} 1 \rightarrow \mathrm{Y} 2=0.447$ $x 0.195=0.087$. The value of the company as an intervening has an indirect effect value of 0.087 , where the value is smaller than the direct effect value, which is 0.447 . These results indicate that Return on Equity has a smaller indirect relationship with stock returns.

## 3) Firm Size (X3) on stock returns (Y2) through firm value (Y1)

The formula for the value of the indirect effect is $\mathrm{X} 3 \rightarrow \mathrm{Y} 1 \rightarrow \mathrm{Y} 2=(\mathrm{pY} 1 \mathrm{X} 3$ ) ( p Y 1 Y 2 ) then $\mathrm{X} 2 \rightarrow \mathrm{Y} 1 \rightarrow \mathrm{Y} 2=0.274$ $x 0.195=0.053$. The value of the company as an intervening has an indirect effect value of 0.274 , where the value is greater than the direct effect value, which is 0.053 . These results indicate that firm size has a smaller indirect relationship to stock returns.

## 4) Exchange Rate (X4) on stock returns (Y2) through firm value (Y1)

The formula for the value of the indirect effect is $\mathrm{X} 4 \rightarrow \mathrm{Y} 1 \rightarrow \mathrm{Y} 2=(\mathrm{pY} 1 \mathrm{X} 4$ ) ( p Y 1 Y 2 ) then $\mathrm{X} 2 \rightarrow \mathrm{Y} 1 \rightarrow \mathrm{Y} 2=$ $(0.057) \times 0.195=0.011$. The value of the company as intervening has an indirect effect value of 0.011 , where the value is greater than the value of the direct effect, which is $(-0.057)$. These results indicate that the exchange rate has a greater indirect relationship to stock returns.
5) Interest rate (X5) on stock returns (Y2) through firm value (Y1)

The formula for the value of the indirect effect is $X 5 \rightarrow Y 1 \rightarrow Y 2=(p Y 1 X 5)(p Y 1 Y 2)$ then $X 2 \rightarrow Y 1 \rightarrow Y 2=(0.204)$ $x 0.195=0.039$. The value of the company as an intervening has an indirect effect value of 0.039 , where the value is greater than the direct effect value, which is ( -0.204 ). These results indicate that interest rates have a greater indirect relationship with stock returns.

## DISCUSSION

## The Effect of Debt to Equity Ratio on Firm Value

The results of testing the first hypothesis obtained that the Debt to Equity Ratio has a negative and insignificant effect on firm value with a significance of $0.139>0.05$. The results of this study are in line with research conducted by Kalsum (2017) which states that the Debt to Equity Ratio has a negative and insignificant effect on firm value, this is because large debt illustrates that company activities have also increased. A slightly different research result is obtained by Suranto (2017) which explains that the projected capital structure with the DER value has a positive effect on firm value, but these results are not significant.

## The Effect of Return on Equity on Firm Value

The result of the t-test analysis for the ROE variable on firm value has a positive and significant effect with a significance value of $0.004>0.05$, indicating that Return on Equity (X2). The results of this study are in line with the results of research conducted by Ardimas (2014), which explains that the value of ROE has a positive and significant effect on firm value. The higher the value of the food company, the higher the company value.

## The Effect of Firm Size on Firm Value

The results of the t-test analysis for the variable company size on firm value have a positive and significant effect with a significance value of $0.055<0.05$. The results of this study are following the results of research shown by Hermuningsih (2012) which explains that company size variables have a positive and significant effect on firm value. The high TA value generated by a company indirectly describes the company's performance. The results of this study are reinforced by the results of research shown by Kalsum (2017) which explains that partially company size has a positive and significant effect on firm value.

## The Effect of Exchange Rate on Firm Value

From the results of the t-test analysis, the exchange rate on firm value has a negative and insignificant effect with a significance value of $0.712>0.05$. Different research results are shown by Padmodiningrat (2019) which explains that the exchange rate has a positive and significant effect on firm value. Players in the international market will certainly be very concerned about determining the foreign exchange rate (forex) because exchange rates will play an important role in transactions.

## The Effect of Interest Rates on Firm Value

The results of the t-test analysis for interest rates on firm value have a negative and insignificant effect with a significance value of $0.192>0.05$. Similar research results are shown by Gumilang (2019) which shows that interest rates have no and insignificant effect on firm value. A decrease in net income will result in a decrease in earnings per share so that the issuer will not buy the company's shares.

## The Effect of Debt to Equity Ratio on Stock Return

The results of the t-test analysis for DER on stock returns have a negative and insignificant effect with a significance value of $0.499>0.05$. The results of this study are not in line with research conducted by Ruwanti (2013) which explains that the DER value has a positive and insignificant effect on stock returns. These results indicate that there are different considerations from some investors in assessing Debt Equity Ratio.

## The Effect of Return on Equity on Stock Return

The results of the t-test analysis for ROE on stock returns have a positive and significant effect and a significance value of $0.024<0.05$. The results of the research are the same as the results of the research by Purnamasari (2015) which explains that the value of ROE has a positive and significant effect on stock returns. The higher the ROE value, the better the company's performance and the impact on the increase in the company's stock price. If the stock price increases, the stock return will also increase.

## The Effect of Company Size on Stock Return

The results of the t-test analysis for company size on stock returns have a positive and insignificant effect with a significance value of $0.690>0.05$. The same research results were also shown by Pratiwi (2015) who explained that the TA value had a positive but insignificant effect. This shows that company size has a positive effect on stock returns partially or simultaneously, the increasing the size of the company, the higher the stock return.

## The Effect of Exchange Rates on Stock Returns

The results of the t-test analysis for the exchange rate on stock returns have a positive and insignificant significance value of $0.671>0.05$. The results of this study are not in line with research conducted by Yunardi (2012) which states that the exchange rate has a positive but insignificant effect on stock returns. The higher the exchange rate, the higher the return obtained by investors and vice versa.

## The Effect of Interest Rates on Stock Returns

The results of the t-test analysis for interest rates on stock returns have a positive and insignificant effect with a significance value of $0.332>0.05$. The results of this study are not in line with the results of research
conducted by Nasir (2010) which explains that interest rates have a significant effect on stock returns. Highinterest rates will make it difficult for the world to pay interest expenses and obligations because high-interest rates will add to the burden on the company so that it will directly affect or even reduce the profit that will be generated by the company.

## The Effect of Firm Value on Stock Return.

The results of the t-test analysis for firm value on stock returns have a positive and insignificant effect with a significance value of $0.199>0.05$. The results of this study are not following the research conducted by Sugiarto (2010) and Fildzah (2015) where the results of the study each show that, the company value projected by PBV has a positive and significant effect on stock returns. The PBV value is often used as a benchmark for investors in measuring the performance of the stock market price. A higher PBV value indicates that the more successful the company is in creating value for shareholders.

## CONCLUSION AND RECOMMENDATION

Debt to Equity Ratio has a negative and insignificant effect on Firm Value because the creation of added value for the company is not only caused by internal factors but also by market conditions (external factors). Return on Equity has a positive and significant effect on Firm Value. The company has a fairly high return on equity so that it adds value to the company and can be an attraction for investors. Firm Size has a positive and significant effect on Firm Value. The company indirectly describes the company's good performance so as to provide and add value to the company.

Exchange Rate has a negative and insignificant effect on Firm Value. The currency exchange rate has weakened so that investors are more likely to buy up dollars so that under these conditions it can lead to increased buying and selling of company securities and in the end will reduce the company's stock price. Interest rates have a negative and insignificant effect on Firm Value. Investors who invest in the capital market are less affected by the fluctuation of interest rates because the increase or decrease in interest rates is only temporary. Debt to Equity Ratio has a negative and insignificant effect on Stock Returns. The high DER value will be a burden for the company because the company is obliged to pay off all of its obligations, which in the end will be a risk for investors. Return on Equity Ratio has a positive and significant effect on Stock Return.

The company has a fairly high return on equity and is also able to generate high profits so that it can improve the welfare of its shareholders. Company size has a positive but not significant effect on Stock Return. Company size is another internal factor of the company that can influence the level of company profitability. Exchange Rate has a positive but not significant effect on Stock Returns. This happened because the rupiah depreciated so that the stock return rate also decreased. The weakening of the exchange rate will also increase the company's costs as a debtor in banking companies. Interest rates have a positive but insignificant effect on Stock Returns. High-interest rates will add to the burden on the company so that it will directly affect or even reduce the profit that will be generated by the company. Firm value has a positive but not significant effect on Stock Return. If a company is valued higher by investors, the company's stock price will increase in the market, which in turn will have an impact on the stock returns to be obtained as well.

Suggestions that can be conveyed are that investors and potential investors should not rule out variables that do not have a significant influence, because these variables are also one of the important variables that can be used in measuring returns and the value of the company. From this research, company management is also expected to observe the behavior of investors in the capital market by understanding the motives of investors so that management can formulate a strategy for the company to attract investors' attention in investing in the company.

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