Financial Performance Analysis of Stock Return in Infrastructure, Utility, and Transportation Sector Companies in the Indonesia Stock Exchange

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Abstract. Research purpose to analyze the effect of partial and simultaneous financial performance on stock returns in companies engaged in the infrastructure, utilities, and transportation sectors in the Indonesian Stock Exchange. The variables of this study include the dependent variable which is represented by debt to equity ratio, return on assets, and total asset turnover then the independent variable is stock return. The study was conducted using a descriptive quantitative, approach by taking data from the company's annual report with sample, which means that all existing samples using the purposive sampling method for 27 companies that had issued financial statements for 3 (three) consecutive years. Based on the result of statistical analysis partially return on asset and total asset turnover variables affect stock returns and debt to equity ratio variables have no effect on stock returns. Simultaneous test result show that the three variables have effect on stock return.

Keywords: Debt to Equity Ratio, Return on Asset, Total Asset Turnover and Stock Return

1 Introduction

According to Fahmi [1] financial performance is an analysis to understand how a company in implementing financial rules has been carried out properly and correctly. The rules that have been applied correctly by the company can show that the company's financial performance is good. Measurement of financial performance is important in company to reflect a description of the performance companies and condition of the company's situation in achieving company targets. In the capitak market, someone who has funds is interested in financing long-term investment. Investors channel their funds to a company and get different rates of return on income, profits or losses stock returns. According to Gitman [2] in a certain period the change in the value of a share plus the amount of money that has been distributed in the form of an initial percentage value of a number of gains and losses is called a stock return.

The celluler telecommunications sub-sector in Indonesia started operating in 1986, during which time Indonesia became one of the first countries to use a commercial version of cellular

technology. The development of the use cellular telephones continues to increase, so various technologies have emerged, including telecommunication service providers in Indonesia.

Previous research that discucces the effect company's financial performance on return share that will be obtained by shareholders/investors has been widely carried out. One of the study's conducted by Tarau [3] they study on "analysis of effect financial performance in stock return in companies sector food and beverage industry in the stock exchange during 2014 – 2018". Where the research results show that the variables return on asset, quick ratio, return on equity, price book value and total asset turnover have a positive effect on stock returns. The variables debt to equity ratio, debt to total asset ratio, current ratio, inventory turnover ratio and price earning ratio have a negative effect on stock returns, and simultaneously all variables affect stock returns in food and beverage industry.

Dewi's [4] research in 2018 with tittle "the effect of financial performance and risk on stock returns in consumer goods industry on the IDX in 2012 – 2016". Prabawa [5] in his research entitled "analysis of the effect of financial performance on risk management and working capital management on stock returns". The result of his research found four indicators of the variables studied including debt to equity ratio, return on investment, current ratio, and total asset turnover. From this variable, it can be concluded that only the current ratio variable has no effect on stock returns and three other variables namely debt to equity ratio, return on investment, and total asset turnover have positive effect on stock returns.

2 Theory and Literature Study

2.1 Financial Performance

According Fahmi [1] financial performance is an analysis to understand how a company applies financial rules properly and correctly. In financial performance analysis, financial analysis tools can be used whose purpose is to understand how good or bad the company's financial situation reflects the company's performance over a certain time.

2.2 Debt to Equity Ratio

According Kasmir [6] debt to equity ratio is used to assess debt with equity or measure the share of each rupiah of own capital that is used as collateral for the entire obligation or debt. For a company, the greater this ratio, the better. Conversely, with a low ratio the higher level of funding provided by the owner and the greater the security limit for the owner and the greater the security limit for the borrower in the event of a loss or depreciation of the asset value. This ratio can also show the company's financial wealth and risk. In simple terms, the variable debt to equity ratio can be used as a benchmark in valuing debt against equity, thus helping to understand how much money the owner of the company is getting from the loan (creditor).

2.3 Return on Assets

According Kasmir [6] the return on assets variable is part of the profitability ratio which is used to measure the company's ability to generate net income based on certain asset levels. Return on assets is calculated by comparing net income with total asset. Return on assets can measure how much net income can be obtained from all assets owned by the company. With the increase in stock prices, the company's stock returns also increase.

2.4 Total Asset Turnover

According Kasmir [6] total asset turnover is an activity ratio that measure a company's ability to generate profits by using its total asset. The faster asset turnover, the higher the total asset turnover of the company. This will have positive effect on the company's operating income which will further increase the company's profit. The increase in profits causes an increase in cash dividends per share distributed.

2.5 Stock Returns

The result obtained from investing are the understanding of stock returns according to Jogiyanto [7]. Stock returns can be divided into two types, namely returns that have occurred or returns that have not occurred but are predicted to occur in the future. Realized return is the return has occurred which is calculated using historical data. This realized return can also be used to determine the expected return in order to know the picture of the return or risk that will occur in the future. The amount of return that will be obtained from funds that have been distributed in the capital market can be said to be a stock return, but the return to be received is not necessarily high and certain. Some of the return components that may be received by investors are dividends, bonus shares, and capital gains. The conclusion is that the return obtained from investing in the capital market is the understanding of stock returns.

The formula for measuring stock returns according to Jogiyanto [7] is:

$$\text{Stock Return} = (P_t - P_{t\_1})/(P_{t-1}). \tag{1}$$

Information:

Pt   : Stock price in period t

P_{t_1} : Stock pice in the previous period

There are two types of stock returns that can be received by investors in buying or owning shares according to Darmadji & Fakhruddin [8], namely:

1.   Capital Gain
        Capital gains or often referred to as capital gains are the amount of profit that can be received by investors when reselling previous shares, the difference between the price when purchased and the stock price when sold, if it is greater then the investor will make a profit, whereas if the price when sold is less than the purchase price. Then the investor suffers a loss or it can also be called a capital loss.
2.   Dividends

Dividends are the result of the distribution of profit shares from the company that owns the shares. Dividends can be in the form of cash or in the form of shares. If the dividends is in the form of cash then what investors will get is a certain amount of cash, while the dividend is in the form of shares in the form of a number of additional shares so that it will increase the shares owned.

3 Hypothesis Development

The measurement of the use of debt to the company's capital owned is called the debt to equity ratio. The calculation of this ratio is to determine the size of the debt composition compared to the company's own capital. The composition of debt that is high than the company's capital is illustrated that the company's debt burden is greater and results in reduced company profits so that this is not effective in causing a decrease in stock returns, if the return received is small it will make investors not want to invest their funds in the company. The higher the DER, the greater the risk company has, which results in economic difficulties when difficult times occur Menon [9] in 2016. This theory is in accordance with te results of research conducted by Tarau [3] in 2020, Dewi [4] in 2018, Candradewi [10] in 2016 and Prabawa and Lukiastuti [5] in 2015 which says that the debt to equity ratio value will cause a smaller stock return received by investors. Therefore the first hypothesis is:

H1: The variable debt to equity ratio has a significant negative effect on stock returns

Return on assets is an indicator in determining the amount of profit owned by the company, the greater the return on asset indicates the company's performance is good and can increase profits and the return received is also high. Conversely, if the ratio is low, it indicates the possibility of declining economic activity according to Munawir [11]. This theory is supproted by research by Tarau [3] in 2020, Dewi [4] in 2018, and research by Maulani [12] in 2019 which states that there is a positive and significant influence on the return on asset variable on stock returns, so from this theoretical concept a hypothesis is proposed the second one is:

H2: Return on asset variable has a positive effect on stock returns

In measuring the level of a company's ability to create profits with its assets, it can use the total asset turnover variable. The high turnover of assets or assets owned can indicate that the company's total asset turnover is good so that the increase in cash dividends has a direct relationship with stock returns. Good asset turnover is characterized by asset turnover which tends to increase every year, according to Kasmir [6]. This hypothesis is supported by previous research by Tarau [3] and Prabawa & Lukiastuti [5] support this theory where the research results show that total asset turnover has an influence on stock returns. Based on this theoretical concept, the third alternative hypothesis is proposed as follows:

H3: The variable total asset turnover has a significant positive effect on stock returns

The research model that shows the relationship between variables looks like the picture below:
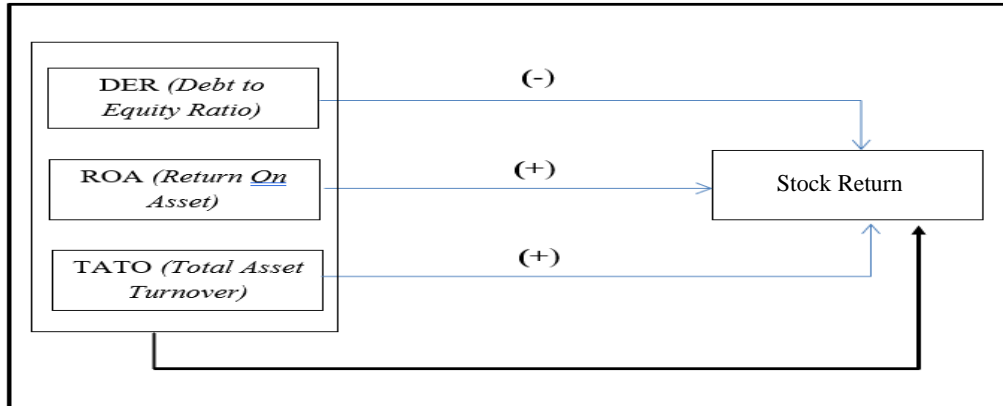

Figure 1. Research Model

Research Method

This study uses descriptive statistical analysis method where the researcher will explain and describe the influence of financial performance related to stock returns in companies engaged in the infrastructure, utilities, and transportation sectors that have been registered as Tbk companies in Indonesia.

Sourced from secondary data that contains theories and infromation that is used to assist the research being conducted. This study obtained the company's annual financial statements from the official website of the Indonesia stock exchange, namely www.idx.co.id, to obtain the stock history, the researchers obtained from the official website at www.yahoo.finance.co.id and also the company's official website.

As for the population that has been determined, the research in taking the sample is selected by the purposive sampling method which has set several criteria in order to obtain a representative sample in accordance with the research. Sample selection criteria are determined on:

    a.   Companies that are active and not delisted from the IDX from 2019 – 2021
    b.   The company publishes annual and audited financial reports from 2019 -2021
    c.   The company has a stock price history for the period 2019 – 2021
    d.   Companies that do not experience losses in the 2019 – 2021 period
    e.   Have complete data in accordance with the variables used

4 Research Result

Sampling Processing Results

In this study, sources were from companies listed in the infrastructure, utilities, and transportation sectors on the IDX for the period 2019 – 2021. The population of this study amounted to 74 with the determination of criteria so that 29 samples of companies were

obtained. With purposive sampling method based on predetermined criteria and the results of the determination process which can be explained in the following table:

Table 1. Company Sample Selection

Information	Amount
IDX-listed companies in the Infrastructure, Utilities and Transportation sectors during 2019 - 2021	74
Companies that are delisted from the Indonesia Stock Exchange for the period 2019 - 2021	(1)
Companies that do not publish annual financial reports and have been audited from 2019 - 2021	(10)
Companies that do not publish stock history during 2019 - 2021	(5)
Infrastructure, Utilities and Transportation Sector Companies that experienced losses in the 2019-2021 period	(29)
Total Company Sample	**29**
Total sample data used for 3 years	**87**

Descriptive Statistical Analysis

In this study, descriptive statistical analysis aims to describe the variables debt to equity ratio, return on asset, total asset turnover, and stock returns. Based on the test result of descriptive statistical analysis can be seen in the table below:

Table 2. Descriptive Statistical Analysis Test Result

Descriptive Statistics					
	N	Minimum	Maximum	mean	Std. Deviation
Debt to Equity Ratio	87	.092	4,589	1.12886	.897417
Return on Assets	87	.000	.251	.05269	.047491
Total Asset Turnover	87	.102	2,512	.54474	.507718
Stock returns	87	80	10049	1357.09	1891,650
Valid N (listwise)	87				

Source: Self-processed data SPSS *output* SPSS 25.0 (2022)

Debt to Equity Ratio

The result of the descriptive statistical analysis test for the debt to equity ratio variable have a maximum value of 4.589 and a minimum value of 0.092 with an average value of 1.128

Return on Asset

The result of the descriptive statistical analysis test of the return on asset variable have a maximum value of 0.251 and a minimum value of 0.000 with an average value of 0.052

Total Asset Turnover

The result of the descriptive statistical analysis test of the total asset turnover variable have a maximum and a minimum value of 2.512 and 0.102, respectively, with an average value of 0.544

Stock Returns

The results of the descriptive statistical analysis test the maximum value is 10.049, and a minimum value of the stock return variable is 80 with an average value of 1.357

Normality Test Results

In this study, the normality test used was based on one sample Kolmogorov-Smirnov where the results of this test said that the variables were normally distirbuted because they has a significance value of 0.200 where this result was greater than 0.05

Table 3. Normality Test Results

		Unstandardized Residual
N		87
Normal Parameters[a,b]	mean	.0000000
	Std. Deviation	.51086406
Most extreme Differences	Absolute	.072
	Positive	.072
	negative	-.067
Test Statistics		.072
asymp. Sig. (2-tailed)		.200

Source: Self-processed data SPSS *output* SPSS 25.0 (2022)

Multicollinearity Test Results

The results of this multicollinearity test found that the VIF value of the debt to equity ratio variable was 1.079. The VIF value from return on asset is 1.433 and the VIF value from taotal asset turnover is 1.350. Each variable meets the requirements of a VOF value of less than 10 and a tolerance of less than 0.1 from this results, so in this study it is free from multicollinearity.

Table 4. Multicollinearity Test Result

Coefficients[a]		
Model	Collinearity Tolerance	VIF Statistics
1 Debt to Equity Ratio	.927	1.079
Return on Assets	.698	1.433
Total Asset Turnover	.741	1,350

Source: Self-processed data SPSS *output* SPSS 25.0 (2022)

Heteroscedasticity Test Results

Output data processing using the SPSS application program:

Table 5. Heteroscedasticity Test Results

Variable	Sig.
Debt to Equity Ratio	0.135
Return On Assets	0.360
Total Asset Turnover	0.161

Source: Self-processed data SPSS *output* SPSS 25.0 (2022)

Based on table 5, the heteroscedasticity test was measured by the Glejser test. Decision making is based if sig. > 0.05 then there is no heteroscedasticity proble and vice versa. The significance value of debt to equity ratio 0.135 > 0.05, the significance value return on asset 0.360 > 0.05, and the significance value of total asset turnover 0.161 > 0.05. It can be concluded that the three independent variables are free from heteroscedasticity problems.

Autocorrelation Test Results

Output data processing use the SPSS application program:

Table 6. Autocorrelation Test Result

Model	Durbin-Watson
1	2,194

Source: Self-processed data SPSS *output* SPSS 25.0 (2022)

Table 6 shows the results of the autocorrelation test using the Durbon-Watson test. The result of the autocorrelation test in this study showed the Durbin-Watson value of 2.149 which the requirements for this autocorrelation test to pass are:

1. DW > DU value. The DU value in this study is 1.723 which can be seen in the DE table with n= 87, k= 3. From this condition has been fulfilled because 2.149 > 1.723

2. DW < 4-DU. The second condition in this autocorrelation test is the value of DW < 4-DU. This can be seen in the calculation: 2.149 < 4-1.723 = 2.149 < 2.277.

From the two condition above, it can be shown that the data in this study are free from autocorrelation.

Hypothesis Test

Multiple Linear Regression Analysis Results

The following is the output of the SPSS application program:

Table 7. Multiple Linear Regression Test Result

Coefficients[a]					
Model		Unstandardized Coefficients B	Coefficients Std. Error	Standardized Coefficients Beta	t	Sig
1	(Constant)	1209.897	161.883		7.474	.000

Debt to Equity Ratio	154.702	82.497	0.73	1.875	.061
Return on Assets	4338.428	1796.639	.109	2.415	0.16
Total Asset Turnover	-470.034	163.136	-.126	-2.881	.004

a. Dependent Variable: Stock *Return*

Source: Self-processed data SPSS *output* SPSS 25.0 (2022)

Based on table 7, the contant value of 1209.897 for debt to equity ratio is 154.702 for return on asset 4338.428, and for total asset turnover -470.034, so that the equation form is obtained:

> **RS = 1209.897 + 154.702DER + 4338.428ROA + -470.034TATO + e**

Discussion of T test analysis

Effect of Debt to Equity Ratio variable on Stock Return

From the research results, the significance level of debt to equity ratio is 0.61, which means it is greater than 0.05 or 5% so that the debt to equity ratio value does not have a significant effect on stock returns. For companies in the infrastructure, utilities, and transportation sectors on the IDX. The results of this study are in line with previous research by Dewi [4] in 2018 which stated that stock returns were not significantly influenced by the debt to equity ratio variable in the consumer goods industry sector companies on the IDX. Tarau [3] in 2020 also concluded that deby to equity ratio has no significant effect on stock returns in companies in the food and beverage industry sector during the 2014 – 2018 period. The debt to equity ratio value which has no effect on stock returns can mean that there are different decision views of each investor.

The company's capital structure is described through the debt to equity ratio variable by making debt as one of the company's sources of income, if the debt to equity ratio owned by the company show a large number, the company's debt is greater than the company's assets so that the company will pay the debt burden and there is a risk of default resulting in the bankruptcy of the company. However, there are several different views from investors that company debt is used for company operations by developing a business or adding assets owned that can generate company income, with growing business and getting big profits, investors will be influenced to invest in the company so that the stock price will also be affected and the return received will also be large.

In theory, this debt to equity ratio variable is only used as a signal to investors that the company's debt to equity ratio value is high so that it will have an impact on stock returns, there are some investors who will analyze it with a high debt to equity ratio value, but there may be some investors who think that this is normal. Occurs in the company, investors have a certain level of parameter over the debt to equity ratio value which will affect the interest in investing in the company.

Effect of Return on Asset Variable on Stock Returns

In this study, the return on asset variable obtained a significance level of 0.016 which indicates less than 0.05 or 5%. This shows that companies that can generate high net income will affect stock returns. These result are supported by previous research Dewi [4] in 2018 which also found that return on asset had a significant effect on stock returns.

The test in this hypothesis is in line with the theory of the logical relationship concept of return on asset with stock returns because the company's ability to generate high profits is more attractive to investors in investing their share capital in the company, so stock prices also increase and stock returns will be accepted also high.

Effect of Total Asset Turnover Variable on Stock Return

The results showed that the total asset turnover variable showed a significance value of 0.004 < 0.005. With this, through the analysis value obtained negative of -2.881 total asset turnover variable has a significant effect on stock returns. The reults of this study are in line with the research of Tarau [3] in 2020 which states that the total asset turnover variable has an effect on stock returns in companies in the food and beverage industry sector in 2014 – 2018.

This shows that there is a unindirectional relationship between total asset turover and stock returns in line with the existing theory which states that total asset turnover is one of the activity ratios in measuring the company's ability to increase sales by using its own assets. Good asset turnover is characterized by higher sales that occur in a certain year, thereby increasing sales revenue. From the theory it is said that total asset turnover has a positive and significant effect on stock returns. This study shows results that are not the same as the theory described, this may be because the research sample of companies with different sub-sectors and also large companies is usually difficult to increase tattoos.

F test Analysis Result

Table 8. F test result

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	42345852.51	3	14115284.17	4.037	.007^b
	Residual	2419551902	692	3496462.286		
	Total	2461897754	695			

a. Dependent Variable: Stock Return

b. Predictors: (Constant), Total Asset Turnover, Debt to Equity Ratio, Return On Asset

Source: Self-processed data SPSS *output* SPSS 25.0 (2022)

From table 8, it can be seen that the value of sig. is 0.007 < 0.05, this shows that the three variables simultaneously have an influence on stock returns.

Conclusion

Based on the results of the analysis in this study, it can be concluded that (1) the debt to equity ratio has no effect on stock returns. This shows that the size of the debt to equity ratio variable owned by a company has no effect on stock returns. (2) return on asset has an effect on stock returns. This is because the greater the net profit generated by the company, the greater the interest of investors in investing in the company, the greater interest of investors in investing in the company in the hope of getting a large stock return. (3) total asset turnover has a significant negative effect on stock returns, meaning that although the total asset turnover rate provided by the company is high, this has an impact that is not in line with investor assessments. Future research is suggested to other researchers to be able to examine other factors that affect the value of the company, for example the current ratio variable, price earning ratio and many others.

Limitations

In conducting this research, there are several things that become obstacles in this study, namely (1) The sample used is only limited to the infrastructure, utilities, and transportation sectors listed on the Indonesian stock exchange so that the number of samples selected is small. (2) The short research period is only 3 years, so as to be able to find out in depth how the stock returns received by investors that are long-term are less than optimal. (3) Only using debt to equity ratio, return on asset, and total asset turnover variables to test their effect on stock returns.

References

[1] Fahmi, I.: Financial Performance Analysis. Bandung: Alphabeta (2017)

[2] Gitman, L., & Zutter, C.: Principles of Managerial Finance 14th Edition (2015)

[3] Tarau, MF, Rasjid, H., & Dungga, MF.: Analysis of the Effect of Financial Performance on Stck Returns in Food and Beverage Industry Sector Companies on the Indonesia Stock Exchange for the 2014-2018 period. Scientific Journal of Management and Business, 110 (9), 2620-9551 (2020)

[4] Dewi, M.: The Effect of Financial Performance and Systematic Risk on Stock Returns in Pharmaceutical Companies on the IDX. I 1-28 (2018)

[5] Prabawa, DW, & Lukiastuti, F.: Case Study of Telecommunication Companies Listed on the Indonesia Stock Exchange in 2010-2013. Indonesia Journal of Management, 1-16 (2015)

[6] Kasmir.: Financial Performance Analysis. In Jakarta: PT Rajagrafindo Persada (2017)

[7] Jogiyanto, H.: Portofolio Theory and Investment Analysis (11th). In Yogyakarta: BPFE (2017)

[8] Darmadji, T., & Fakhruddin, H.: Capital Markets in Indonesia: A Question and Answer Approach. Jakarta: Earth Literacy, 3rd edition (2015)

[9] Menon, UV. Impact of Capital Structure on Stock Prices: Evidence from Oman. International Journal of Economics and Finance, 8 (9), 249 (2016)

[10] Candradewi, MR.: The Effect of Financial Performance on Stock Returns in LQ45 Companies in BEI: Panel Data Regression Analysis. E-Journal of Economics and Business, Udayan University,7, 2091-2122 (2016)

[11] Munawir, DS.: Analysis of Financial Statements. In Yogyakarta: Liberty (2012)

[12] Maulani, D., Rinda, RTK, & Rumiasih, NA.: Financial Performance Against Stock Returns. Innovator, 8 (1), 11 (2019)