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Financial Ratio Analysis to Assess Financial Performance in Transportation Sector Companies Listed on the Indonesia Stock Exchange in 2019-2021

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ABSTRACT: *Every company must have a financial management. Financial management is very important to monitor and see the value of company performance. This study aims to test and analyze whether the liquidity ratio, solvency ratio, and activity ratio have a simultaneous and significant effect on financial performance. The data collection method used in this study was Purposive sampling with a population of 48 companies and 39 companies as samples. This study uses statistical tests, namely classical assumption tests, multiple linear regression analysis, and hypothesis testing. Based on the results of the study, it can be concluded that the liquidity ratio with proxy current ratio (CR), solvency ratio with proxy debt to equity ratio (DER), and activity ratio with proxy total asset turnover (TATO) generate a significant influence on the company's kinerka with proxy return on asset (ROA) simultaneously. Partially, the results show that the solvency ratio with a proxy debt to equity ratio (DER) does not have a significant and positive influence on financial performance. Meanwhile, other variables separately have a significant positive influence on the financial performance of transportation sector companies listed on the IDX for the 2019-2021 period.*

Keywords: *Liquidity Ratio, Solvability Ratio, Activity Ratio, Company Performance.*

I. INTRODUCTION

The current condition of economic growth in Indonesia has the impact of very tight competition in various industries. One way that can be taken is by improving its internal capabilities, be it in the form of improved technology, product quality, human resource quality, cost efficiency, or higher performance, so that it requires good technology to support the success of a company.

The survival of a company requires that it be managed more efficiently and effectively, where profit becomes the main factor that benefits the company for work done in a certain period. Thus, all companies that go public must prepare financial statements properly. Coordinated financial planning is one of the keys to a successful business. One of the main factors to consider for shareholders and potential shareholders before making their choice to invest is how the company's financial performance is implemented.

Financial performance is an analysis conducted by a company to ascertain the extent to which it has implemented it correctly and uses the Financial Code of Practice (Fahmi, 2017). When evaluating the success of a company's financial performance, it is usually assessed through financial statement analysis. The company must conduct an analysis of its financial statements to determine the actual development of its financial position. Financial ratio analysis itself begins with basic financial statements, namely the balance sheet, profit loss calculation, and cash flow statement By using the financial ratio analysis method, we will better know how the company's financial condition is in certain periods.

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In Research Intan, et al. (2017), some financial ratio analysis that companies can use in assessing financial performance is the analysis of liquidity, solvency, activity, and profitability ratios. The purpose of this study is to measure the financial performance of companies in the transportation sector using financial ratio analysis.

Based on the explanation described above, the researcher wants to compile a final project entitled "Financial ratio analysis to assess financial performance in transportation sector companies listed on the Indonesia stock exchange in 2019–2021" to find out the weaknesses and strengths of the company, where these weaknesses must be investigated and corrected and the strengths that exist in the company are used as reference material for planning future financial performance.

II. MATERIAL AND METHODS

2.1. Theoretical Basis

Liquidity ratio

The liquidity ratio describes the company's ability to meet its obligations or repay its short-term debts on time. In other words, the liquidity ratio is the ratio that can be used to determine the level of a company's ability to pay maturing current liabilities (Fahmi, 2011). The type of liquidity ratio used is the current ratio (CR).

Solvency ratio

According to Rudiwantoro (2020), this ratio is used to measure the company's ability to pay all obligations, both short-term and long-term, if the company is dissolved (liquidated). The solvency ratio is a ratio used to measure the extent to which a company's assets are financed with debt. The type of solvency ratio used is the Debt to Equity Ratio (DER).

Activity Ratio

The activity ratio is a ratio used to measure the effectiveness of the company in using its assets. Or it can also be said that this ratio is used to measure the level of efficiency (effectiveness) of company resource utilization (Kasmir, 2014). The type of activity ratio used is total assets turnover (TATO).

Profitability Ratio

The profitability ratio is a ratio to assess the company's ability to seek profit. This ratio also provides a measure of the level of management effectiveness of an enterprise. This is indicated by the profit generated from sales and investment income. The results of these measurements can be used as a tool for evaluating management performance so far and determining whether they have worked effectively or not. Therefore, this ratio is often referred to as one of the management performance measurement tools (Kasmir, 2014). The type of profitability ratio used is the return on assets (ROA).

2.2. Hypothesis Development

The Effect of Current Assets (CR) on Return on Assets (ROA)

According to Intan et al. (2017), current assets are a comparison of excess cash or other current assets with current debt, which is debt that must be paid as soon as possible (no more than one year). The results of this study state that the current ratio negatively affects the return on assets. This means that if the current ratio increases, it will decrease the value of return on assets, while if the current ratio decreases, it will increase the value of return on assets. Meanwhile, in research (Erlin and Widaryanti, 2022), the current ratio has a significant effect on financial performance as measured by the return on assets proxy. Based on the theory and results of previous research, the hypotheses proposed in this study are:

H1: The variable current ratio (CR) has a significant influence on the return on assets (ROA).

The Effect of Debt to Equity Ratio (DER) on Return on Asset (ROA)

According to Muhammad et al. (2021), the debt-to-equity ratio is a financial ratio that is used to determine the

size or proportion of the company's own debt and capital used to finance its assets. In Sari's research (2019) and Muhammad's research, et al. (2021), it is shown that debt to equity has a negative effect on financial performance, which is proxied by ROA. Meanwhile, research (Henny and Chess, 2016) shows that the results of DER have a positive effect on financial performance as measured by ROA. Based on the theory and results of previous research, the hypotheses proposed in this study are:

H2: Variable Debt to Equity (DER) has a significant influence on Return on Assets (ROA).

The Effect of Total Asset Turnover (TATO) on Return on Asset (ROA)

Total Asset Turnover is the company's ability to generate sales based on the effective use of total assets. The effect of total asset turnover on changes in company profits is that the faster the level of asset turnover, the more profits will be generated because the company can already use these assets to increase sales, which affect profit income (Intan et al. 2017). In research (Intan et al., 2017) and Henny and Catur (2016), the results showed that total asset turnover (TATO) has a positive effect on return on assets (ROA). Based on the theory and results of previous research, the hypotheses proposed in this study are:

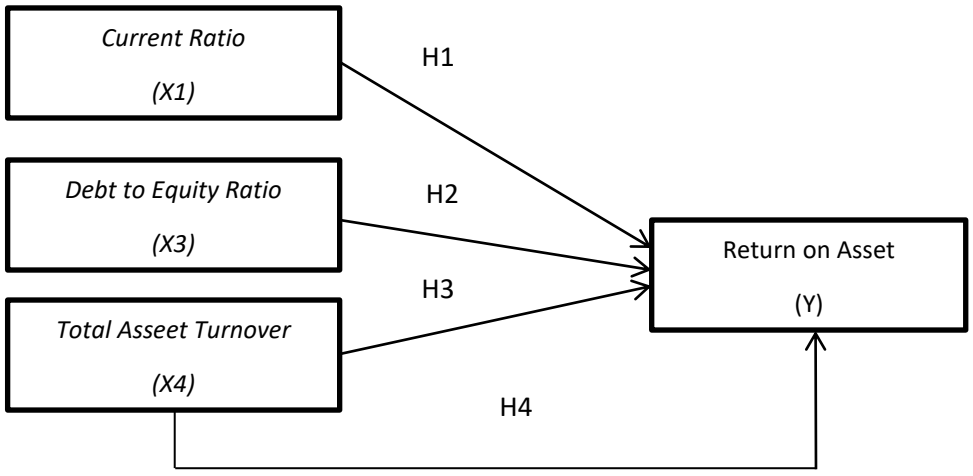
H3: Variable total asset turnover (TATO) has a significant influence on return on assets (ROA).

The effect of CR, DER, and TATO on Return On Asset (ROA)

The current ratio (CR) is used to determine how much the company's ability to pay its debts will mature. Total Asset Turnover (TATO) is used to determine the effectiveness of the company in managing its business. The debt-to-asset ratio (DER) is used to find out how much of a company's funds come from debt. Referring to the research of Rachmat Rizky Muchlis (2017), the current ratio, total asset turnover, and debt to asset turnover together have a significant effect on return on assets. Based on the theory and results of previous research, the hypotheses proposed in this study are:

H4: The variables current asset (CR), debt to equity (DER), and total asset turnover (TATO) have a significant influence on return on asset (ROA).

2.3. Research Framework



III. RESEARCH METHODS

The population used in this study is transportation sector companies from 2019–2021 listed on the Indonesia Stock Exchange (IDX) at www.idx.co.id. Sampling using the Purposive Sampling method The qualifications determined by researchers in conducting sampling include:

1. Transportation sector companies listed on the Indonesia Stock Exchange (IDX) for the 2019–2021 period
2. Companies that publish annual reports during the 2019–2021 period.

The dependent variable used in the study is financial performance using profitability ratios. The independent

variables used in this study are the liquidity ratio, solvency ratio, and activity ratio.

Dependent Variables

The profitability ratio is a ratio to assess the company's ability to seek profit. This ratio also provides a measure of the level of management effectiveness of an enterprise. In the profitability ratio, researchers use return on assets (ROA), carried out as an assessment of the company's ability by looking at the extent of investment that has been given and that can provide profits in accordance with what investors want.

Calculation Formula:

$$\text{Return on Assets} = \frac{\text{Net Profit After Tax}}{\text{Total Assets}} \times 100\%$$

Free Variable (Independent)

Liquidity Ratio

The liquidity ratio describes the company's ability to meet its obligations or repay its short-term debts on time. In the liquidity ratio, researchers use the current ratio (current ratio). According to Khair et al. (2016), the current ratio is a ratio used to estimate the company's ability to handle all current debts using its current assets.

Calculation formula:

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}} \times 100\%$$

Solvency Ratio

According to Rudiwantoro (2020), this ratio is used to measure the company's ability to pay all obligations, both short-term and long-term, if the company is dissolved (liquidated). The solvency ratio is a ratio used to measure the extent to which a company's assets are financed with debt. In the solvency ratio, researchers use the ratio of total liabilities (the debt-to-asset ratio) and the ratio of total equity (the debt-to-equity ratio).

The Total Equity Ratio (also known as the Debt to Equity Ratio) is a ratio used to assess debt to equity. This ratio is sought by comparing all debt, including current debt, with all equity.

Calculation formula :

$$\text{Debt to Equity Ratio} = \frac{\text{Total Liabilities}}{\text{Total Equity}} \times 100\%$$

Activity Ratio

The activity ratio is a ratio used to measure the effectiveness of the company in using its assets. Or it can also be said that this ratio is used to measure the level of efficiency (effectiveness) of company resource utilization (Kasmir, 2014). In the activity ratio, researchers use Total Assets Turnover (TATO), a ratio used to measure all assets owned by the company and measure how much sales are obtained from each rupiah of assets (Kasmir, 2014).

Calculation Formula:

$$\text{Total Assets Turnover} = \frac{\text{Net Sales}}{\text{Total Assets}} \times 100\%$$

IV. RESULT AND DISCUSSION

This study uses data from Transportation Sector companies listed on the Indonesia Stock Exchange (IDX) for the 2019–2021 period, with several criteria to determine the research sample. Purposive sampling method is used to determine samples in data processing. So 117 data points were obtained, but because the initial model was not fit, an outlier of 1 data point was carried out so that there were 116 data points for processing this study.

Normality Test

The normality test in this study used Central Limit Theorem (CLT) test analysis. If the number of data is above 30 then the data is normal. The research data is 117 based on transportation sector companies in Indonesia which have complete data related to one dependent variable and three independent variables for the 2019-2021 period. The data was outlier to 116 data which then carried out several related tests to ensure that the data was distributed normally. Based on this discussion, it can be concluded that the data sample of 116 is greater than 30 indicating that the data has been distributed normally.

Multicollinearity Test

The multicollinearity test is carried out to test whether a correlation is found between independent variables. To perform the test, more than one independent variable is needed in the study. Test measurements use tolerance values and a variance inflation factor (VIF). If the tolerance value is greater than 0.10 and the variance inflation factor (VIF) value is smaller than 10.0, multicollinearity does not occur. The results of the multicollinearity test are as follows:

Coefficients[a]

Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
B	Std. Error	Beta			Tolerance	VIF
-,077	,020		-3,924	,000		
,016	,007	,218	2,427	,017	,960	1,042
,000	,001	-,031	-,349	,728	,995	1,005
,069	,025	,251	2,794	,006	,958	1,044

a. Dependent Variable: ROA

In the output, the value of VIF and tolerance of each variable are:

a. CR : VIF value 1.042 < 10 and tolerance 0.960 > 0.10

b. DER : VIF value 1.005 < 10 and tolerance 0.995 > 0.10

c. TATO : VIF value 1.044 < 10 and tolerance 0.958 > 0.10

So it can be concluded that CR, DER, and TATO data pass the multicollinearity test or that multicollinearity does not occur.

Heteroscedasticity Test

The heteroscedasticity test aims to determine, using the Spearman test, whether in the regression model there is a variance inequality from the residual of one observation to another. If the significance value between the independent variable and the absolute residual > 0.05, heteroscedasticity does not occur. Heteroscedasticity Test Results as Follows:

Correlations

			CR	DER	TATO	Unstandardized Residual
Spearman's rho	CR	Correlation Coefficient	1,000	-,270**	,129	,068
		Sig. (2-tailed)	.	,003	,167	,469
		N	116	116	116	116
	DER	Correlation Coefficient	-,270**	1,000	,048	,087
		Sig. (2-tailed)	,003	.	,609	,352
		N	116	116	116	116
	TATO	Correlation Coefficient	,129	,048	1,000	,115
		Sig. (2-tailed)	,167	,609	.	,218
		N	116	116	116	116
	Unstandardized Residual	Correlation Coefficient	,068	,087	,115	1,000
		Sig. (2-tailed)	,469	,352	,218	.

		N	116	116	116	116

**. Correlation is significant at the 0.01 level (2-tailed).

Based on the table above, it is known that the significance value of each variable is above 0.05, so it can be concluded that the regression model in this study did not exhibit heteroscedasticity or pass the heteroscedasticity test.

Autocorrelation Test

The autocorrelation test aims to determine whether or not there is a correlation between the confounding variable in a certain period and the confounding variable in the previous period. If the study uses secondary data, then it uses an autocorrelation test. Correlation problems can occur because successive observations over time are related to each other. In this study, autocorrelation testing used the Durbin-Watson test. The results of autocorrelation testing are presented as follows:

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,363[a]	,132	,109	,126570	1,954

a. Predictors: (Constant), TATO, DER, CR

b. Dependent Variable: ROA

Based on the table above, it is known that the autocorrelation test using the Durbin Watson method obtained a value of 1.954; k represents the independent variable number 3; N represents a sample of 116 data points; the du value sought in the distribution of Durbin Watson table values based on k (3) and N (116) with a significance of 5% of 1.7504; and a value of 4-du (4-1.7504) so that a value of 2.2496 is obtained. The conclusion of the test is that there is no autocorrelation symptom because the Durbin Watson value lies between du and 4-du values.

$$\mathbf{du} < \mathbf{dw} < \mathbf{4 - du} \rightarrow \mathbf{1,7504} < \mathbf{1,954} < \mathbf{2,2496}$$

Multiple Linear Regression Analysis

Multiple linear regression tests aim to determine the influence of independent variables on dependent variables. The calculation of multiple linear regression models in this study was carried out using the SPSS 26 program, with the following analysis:

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients
		B	Std. Error	Beta
1	(Constant)	-,077	,020	
	CR	,016	,007	,218
	DER	,000	,001	-,031
	TATO	,069	,025	,251

a. Dependent Variable: ROA

Based on the results of the multiple linear regression test, the following regression equation is obtained along with the interpretation of the research test results:

$$\boldsymbol{ROA = 0,077 + 0,016\ CR + 0,000\ DER + 0,069\ TATO + e}$$

From the equation above, it can be explained as follows:

1. The results of multiple linear analysis show a constant value of 0.077, meaning that if the variables CR, DER, and TATO are 0, then the development of profitability is 0.077.
2. Regression coefficient Current Ratio (X1) = 0.016. A positive current ratio regression coefficient value indicates a unidirectional relationship to profitability, which means that if the current ratio is increased by one unit, profitability will increase by 0.016 assuming another independent variable is constant.

3. Regression coefficient Debt-to-asset ratio (X2) = 0.000. A positive debt-to-asset ratio regression coefficient value indicates a unidirectional relationship with profitability, which means that if the debt-to-asset ratio is increased by one unit, profitability will increase by 0.000, assuming another independent variable is constant.

4. Regression coefficient of total asset turnover (X3) = 0.069 A positive Total Asset Turnover regression coefficient value indicates a unidirectional relationship to profitability, which means that if Total Asset Turnover is increased by one unit, profitability will increase by 0.069, assuming another independent variable is constant.

Test F

This test aims to determine the overall influence of the independent variable on the dependent variable. This study used a significance level of 0.05. If the probability value is greater than 0.05, then the model is correct. Here are the results of the F test:

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	,272	3	,091	5,668	,001[b]
	Residual	1,794	112	,016		
	Total	2,067	115			

a. Dependent Variable: ROA

b. Predictors: (Constant), TATO, DER, CR

Based on the table above, it is known that the sig value is 0.001. Because the sig value is 0.001 < 0.05, then according to the basis of decision making in the F test, it can be concluded that the hypothesis is accepted, or in other words, CR, DER, and TATO simultaneously affect ROA.

Test T

The T test is carried out to determine the overall influence of the independent variables CR, DER, and TATO on the dependent variable, namely ROA. If the sig value < 0.05, then H0 is accepted because there is no significant effect on the dependent variable. If the sig value > 0.05, H0 is rejected because there is a significant effect on the dependent variable.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-,077	,020		-3,924	,000
	CR	,016	,007	,218	2,427	,017
	DER	,000	,001	-,031	-,349	,728
	TATO	,069	,025	,251	2,794	,006

a. Dependent Variable: ROA

Based on the results of the T test in the table above, the explanation can be described as follows:

1. If the variable CR sig 0.017 > 0.05, then the hypothesis (H1) is accepted, meaning that the variable CR has a partial effect on the ROA variable.

2. If the DER variable sig 0.728 > 0.05, then the hypothesis (H2) is rejected, meaning that the DER variable has no partial effect on the ROA variable.

3. TATO variables with sig 0.660 > 0.05, then the hypothesis (H3) is accepted, meaning that the TATO variable has a partial effect (individually) on the ROA variable.

Coefficient of determination test

To see the value of influence between dependent and independent variables, look at the adjusted R square, which can be seen from the table as follows:

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,363[a]	,132	,109	,126570

a. Predictors: (Constant), TATO, DER, CR

b. Dependent Variable: ROA

Based on the table above, the adjusted R square value (coefficient of determination) of 0.109 or 10.9% shows that the ability to explain the independent variables CR, DER, and TATO to the dependent variable ROA is 10.9%, while 89.1% is explained by other variables outside the three independent variables that are not included in the model.

Discussion

1. The Effect of Current Assets (CR) on Return on Assets (ROA)

In the results of the partial T test regression analysis for the liquidity ratio variable assessed by CR proxy, the significant value obtained is 0.017. Based on these results, it can be assumed that the CR variable has a positive value and has a partial significant effect on financial performance with ROA proxies. The results of this study are in line with previous research compiled by Erlin and Widaryanti (2022), with the results of CR having a significant effect on financial performance in ROA proxies.

It is indicated that the higher the CR of a company means the less risk of the company's failure to meet its short-term obligations. As a result, the risk that will be borne by shareholders is also getting smaller. A high CR value of a company will reduce uncertainty for investors, but indicates the presence of idle funds that will reduce the company's profitability, as a result the ROA is also smaller. Thus, it is suspected that the greater the CR value, the smaller it is.

2. The Effect of Debt to Equity Ratio (DER) on Return on Assets (ROA)

In the results of the partial T test regression analysis for the solvency ratio variable assessed by DER proxy, the significant value obtained is 0.728. Based on these results, it can be assumed that the DER variable has a positive value and does not have a partial significant effect on financial performance with ROA proxies. The results of this study are in line with previous research compiled by research (Sari, 2019) and research (Muhammad, et al., 2021) showing that debt to equity has a negative effect on financial performance as proxied by ROA, contrary to research (Henny and Catur, 2016) showing that the results of DER have a positive effect on financial performance as proxied by ROA.

This means that a low or high Debt to Asset Ratio cannot have a significant effect on profit generation in the company. Basically, the company's capital consists of its own capital and capital from debt. The use of debt in companies is generally used to increase productivity which is then expected to increase profits. The optimal use of debt will have a good impact, but it needs to be underlined that debt is an obligation that must be paid in the future. The result of using debt is the obligation to pay interest, the greater the debt, the greater the interest to be paid. Although it does not have a significant effect, it must still be considered, maintaining the stability of this ratio is also important.

3. The Effect of Total Asset Turnover (TATO) on Return on Asset (ROA)

In the results of the partial T-test analysis for the activity ratio variable assessed by the TATO proxy, the significant value obtained was 0.006. On the basis of the test results, it can be assumed that the TATO variable has a partial positive effect on financial performance as measured by ROA. The results of this study are the same as those of previous studies by researchers (Intan et al. (2017) and Henny and Catur (2016) showing that total asset turnover (TATO) has a positive effect on return on assets (ROA).

A positive value in the data test results shows a unidirectional relationship, namely if the value of the TATO increases, the resulting ROA value will also increase. This means that low or high Total Asset Turnover can have

a significant influence on profit generation in the company. . Total Asset Turnover has an important role in the return of a company's assets, so if the asset turnover is good, the return on assets is also good. Because current assets and fixed assets are part of the company's assets so that if the asset turnover is managed properly, the rate of return on assets will be good, and vice versa if the asset turnover is managed poorly then the rate of return on assets is also not good.

4. The Effect of CR, DER, and TATO on Return On Asset (ROA)

Based on the results of regression analysis, the F test for the variables liquidity ratio (CR), solvency ratio (DER), and activity ratio (TATO) resulted in a significant value of 0.001. Based on these results, it can be assumed that all independent variables have a simultaneous influence on financial performance as measured by ROA.

Based on these conclusions, it can be assumed that the variables liquidity ratio (CR), solvency ratio (DER), and activity ratio (TATO) can be used to estimate the company's performance (ROA) for the future. Because the results of the F test show that the independent variable tested simultaneously has a significant effect on the dependent variable.

V. CONCLUSION

Conclusion

Based on the results of research and discussions that have been stated previously, conclusions can be drawn from research on the effect of current ratio (CR), debt to asset ratio (DER), and total asset turnover (TATO) on return on asset (ROA) in transportation sector companies listed on the Indonesia Stock Exchange (IDX) for the 2019-2021 period as follows:

1. There is a significant influence of the current ratio (CR) on the return on assets (ROA) of transportation sector companies listed on the Indonesia Stock Exchange for the 2019–2021 period.
2. There is no significant effect of debt-to-asset ratio (DER) on return on assets (ROA) in transportation sector companies listed on the Indonesia Stock Exchange for the 2019–2021 period.
3. There is a significant influence of total asset turnover (TATO) on return on assets (ROA) in transportation sector companies listed on the Indonesia Stock Exchange for the 2019–2021 period.
4. There is a significant influence of current ratio (CR), debt-to-asset ratio (DER), and total asset turnover (TATO) simultaneously on return on asset (ROA), which means that these three variables will simultaneously affect ROA in transportation sector companies listed on the Indonesia Stock Exchange for the 2019–2021 period.

Research Limitations

Here are some research limitations that researchers face while making this thesis report, including:

1. This study has limited observations because the period taken is relatively short, only 3 years from 2019 to 2021, so the data taken allows for the lack of desired results.
2. For company data to be used in this study, initially there were 117 companies. But due to outliers, where the data produced has extreme values, the test results are not distributed normally. Therefore, the sample of companies used was reduced to 116.

Suggestion

Based on the conclusions that have been described and the results of this study, the author provides suggestions, including:

1. Company management must think more about every step or policy taken because the company's success can be realized if the policy taken is right. The use of debt in business is beneficial if managed well and dangerous if managed less well. The most important thing is how to make revenue increase so that profits also increase and the company's goals are realized.
2. For investors who want to invest in the company, they should be very careful in analyzing the company so that what is expected can be achieved. Some ratios that can be used as a tool to analyze

companies include the current ratio (CR), debt-to-asset ratio (DER), total asset ratio (TATO), and return on assets (ROA), so that investors can make investment decisions to invest.

3. In this study, the research period was only 3 years. It is recommended that further researchers be able to conduct similar studies with a longer duration so as to produce even better research.

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