

Analysis of Financial Performance in Manufacturing Companies Using Financial Ratios

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ABSTRACT

Background: The objective of every company is to generate profit, increase sales and improve the welfare of employees and shareholders. **Purpose:** This research aims to investigate the impact of sub-manufacturing companies on the Indonesia Stock Exchange on profitability, liquidity, and activity. **Method:** The study employed a quantitative research method and utilized purposive sampling to select 10 out of 26 companies that met the researcher's criteria. **Result:** The research results indicate a significant influence between profitability, liquidity, and activity on financial performance (F-test, sig value of $0.000 < 0.05$, F table $2.807 > 255.546$). The regression model is considered worthy of further research. Additionally, the T-test shows that profitability and liquidity have a significant effect on financial performance, while activity does not.

Keywords: management, finance, sales.

INTRODUCTION

The ability to generate and increase profits is the measure of success for any society or business. The primary goal of any business is to make a profit. This in turn attracts investors and improves the financial performance of the business. Financial performance measurement is crucial to evaluate the success of a company's activities.

Financial performance measurement is critical to evaluating the success of a company's activities. In order to evaluate a company's success and increase its efficiency, it is necessary to measure its financial performance according to (Istikomah, 2017). Financial ratio analysis is a measure of a company's performance in terms of profitability, liquidity, and solvency. Financial ratio analysis includes profitability, liquidity, and activity ratios. Profitability ratios include return on assets (ROA), which measures the amount of profit earned on all of a company's assets. ROA is an indicator of the effectiveness of a company's management and its ability to generate profits.

Liquidity ratio includes current ratio, which measures firm's ability to pay short-term obligations based on current assets and liabilities based on (Agustini & Wirawati, 2019). This ratio can be used for the comparison of firms and the determination of their ability to pay obligations, which is based on their assets. A high current ratio indicates high current assets.

The current ratio measures the turnover of total assets. It indicates the level of effectiveness in utilizing a company's assets. A high ratio indicates good management of the company, while a low ratio may prompt management to evaluate its strategy, marketing, and investment (Mahmud, & Halim, 2016). Manufacturing companies, particularly those in the food and beverage sub-sector, play a crucial role in supporting a country's economy and promoting its development.

LITERATURE REVIEW

Every entity has a financial report that illustrates its financial condition or the resources it has managed according to the company's accounting standards. The financial report serves as a benchmark for success. The financial reports display the company's proficiency in various accounting procedures that facilitate communication between parties requiring information based on the company's financial data, such as investors (Andrey, et al., 2013). The reports provide insight into the company's financial performance in the previous

period. Financial performance is the analysis of how effectively and efficiently a company's users have implemented its financial components (Istikomah, 2017). Financial ratios can be used to analyze profitability.

The purpose of this assessment is to measure the effectiveness of management by evaluating the level of profit generated by the company in a given period based on its assets, sales, and share capital (Pantjaningsih, 2018). One of the profitability ratios used for this analysis is:

- a) Profit Margin Profit margin is one part of profitability ratio analysis which aims to see the condition of profit on sales obtained by the company. This ratio is measured by comparing the net profit received by the company with the company's sales.
- b) Return on assets is company profit income based on a certain level of assets. So if this ratio gets a high lift, it shows that the company management is effective and efficient. This ratio is calculated using the net profit received by the company and with all the company's assets

Financial ratios are a technique used by companies to assess their performance and identify areas for improvement. They are calculated using information from the company's most recent financial report. Company management often uses financial ratios to make decisions, such as managing resources and complying with regulations. To guarantee accurate decision-making, companies analyze management using financial ratios. The most common types of financial ratios are liquidity ratios, solvency ratios, activity ratios, and profitability ratios.

The liquidity ratio (Darmawan., 2020) measures a company's ability to use current assets to meet its short-term obligations to creditors when they fall due. Liquidity is a multifaceted concept that encompasses the ability to generate profits from sales of goods and administration, the ability to generate profits from needs, and working capital. Functional training can provide insights into these aspects of liquidity (Subramanyam, 2017). Liquidity ratios can be used to evaluate how effectively company management manages its funds. Trust funds hold funds for the repayment of short-term debt.

When evaluating management performance in operating company funds, profit is commonly used as a criterion. As stated by (Suwardjono, 2020), company profits are a reward for their efforts in producing goods or services. Profit is calculated as the net income obtained from company activities, which include the production and marketing of products. To calculate profit, the results are reduced by the costs of the company's operational activities. Profit is the difference between a company's income and total costs.

Profit growth refers to the adjustment in the level of benefits obtained by an organization in a certain period. Profit growth is calculated by dividing the previous period's profit by the current period's profit and subtracting the previous period's profit. A positive profit growth is viewed favorably by investors, which can increase the value of the business. Strong profit growth provides businesses with the opportunity to increase profitability and expand their assets. The company's growth can also be measured by expanding margins, high sales, and profits.

According to (Angkoso, 2006), the age of a firm is an important factor influencing profit growth. Companies that have been established for a longer period of time tend to have more operational experience, which leads to higher profits compared to newly established companies.

The size of a company is a determining factor, which is calculated based on its revenue. A large, well-known company in the industry is more likely to be successful. In addition, the level of sales also has an impact. The more contracts a company produces, the greater the profit growth. The level of leverage is a crucial factor for companies with high debt levels and a tendency to manipulate profits, which hinders proper profit growth.

The solvency ratio is used to determine the proportion of asset funds that come from debt and the organization's capacity to repay its commitments, including temporary and long-term obligations. A high solvency ratio indicates a greater risk of losing money, but also a greater potential for profit. During an economic downturn, the solvency ratio indicates a low risk of loss.

The activity ratio demonstrates a company's efficiency in utilizing its existing resources. This ratio compares a company's sales and investments in various assets, highlighting the importance of balancing asset sales and investments. It is crucial to use precise language when discussing resource sourcing, especially when the value of the resource is insufficient for sales. The funds should be invested in more productive assets to improve their quality and usefulness.

The profitability ratio measures a company's success in generating profits from its operations

(Darmawan., 2020). When carrying out functional exercises, the board can measure the level of survival by utilizing the proportion of profits. Capital, sales, and assets are the primary means by which a company can generate profits. Therefore, a higher productivity proportion value indicates a better organizational value. The company's earnings and cash flow demonstrate a high level of profitability.

Financial reports are the main means by which companies provide information to third parties, according to (Kieso, 2020). The companies use the financial reports as a medium to convey the information for a certain period of time. Financial reports can also be a description of the company's operating performance. Financial reports are used to communicate with investors, governments, creditors, unions, communities, and other interested parties. Investors and other interested parties find it easier to make decisions because good financial reports are easy to understand.

The report on the financial position is a report that describes in detail the sources of wealth and its distribution in a systematic way, called the statement of financial position. This statement of monetary position presents a complete set of resources consisting of current resources and fixed resources, temporary liabilities and long-term liabilities, as well as the value for a certain period of time. At the end of a business period a financial statement is usually prepared.

The profit and loss statement is an important part of an organization's annual report and is a report on the organization's salaries, costs, and profits and losses for a given period. It can be seen from the profits that a company makes whether it is good or not. A cash flow statement details the cash inflows and outflows of a company over a certain period of time. This report shows changes in capital caused by transactions. It also shows additions and subtractions to profits and losses.

Financial statement analysis is a strategy used by organizations in general to view the organization's presentation. Financial statement analysis is used to evaluate a company's internal performance and compare it with other companies in the same industry. The company needs to conduct an analysis of its financial statements to determine whether its development is successful or not. Companies can see the current financial stability by calculating the profits and losses of the organization. Internal parties as well as investors, creditors and other stakeholders can benefit from financial statement analysis.

Financial reports are an important source of financial information for companies. For example, investors rely on financial reports to make decisions because they want to know what will happen in the future. The purpose of financial report analysis is to compare one financial report with other financial reports to evaluate management performance over time.

According to (Kasmir, 2019), the purpose of financial report analysis is to determine the monetary situation of the organization in one period. Then, it functions to find out the strengths and weaknesses of the organization. Apart from that, it functions to find out what steps the organization can take to make improvements related to the organization's monetary situation. Then to evaluate management performance and correlation with organizations in similar fields.

Calculating ratios that companies use to evaluate their current, past, and future financial condition is a fundamental part of financial ratio analysis. Financial ratios are used to compare the numbers in a financial report by taking one number and dividing it by another number (Kasmir, 2019).

Ratio analysis can be used to determine how a balance sheet, income statement, or a combination of the two statements relate to each other. Financial ratios can be used to calculate and guide decisions based on data in financial statements, either balance sheets or income statements, or both. Companies also use financial ratios to evaluate financial condition and management performance.

The current ratio (Kasmir, 2019) measures the company's ability to pay off short-term debt using current assets that will soon mature. Current assets include accounts receivable, cash, inventory, and other similar assets, while short-term debt includes accounts payable, bank loans, salaries payable, notes payable, and other similar accounts.

The liquidity ratio evaluates a company's ability to use its assets to pay off short-term debt that will soon mature. A decent current ratio typically ranges from 1.5 to 3, although the ideal range varies for each business. Therefore, the results of the current ratio may or may not depend on the company. If the ratio value is less than 1, a business may have liquidity problems. On the other hand, if the proportion value exceeds 3, the organization

may not be using its existing resources efficiently and may not be managing its capital appropriately.

The current ratio is a measure of the extent to which a company's assets can be used to pay its debts. It is also used by management to assess the company's ability to handle short-term debt and plan for cash and liabilities. It is important to consider the sections on current resources and obligations when analyzing the current ratio for any organizational weaknesses.

According to (Sawir, 2020), the analysis of the current ratio must take into account several factors, including the distribution or proportion of current assets, the credit terms between creditors and the company in the procurement of merchandise or the credit terms given by the company in the sale of merchandise, the present value of current assets, the change in inventories in relation to the sales volume of the company in the present or future, the possibility of excessive investment in inventories, the amount of working capital in the future, and the type of company.

The company utilizes the total asset turnover ratio in its operations. This ratio measures the organization's ability to generate net sales from its resources. According to (Kasmir, 2019) Total asset turnover reflects how effectively management can utilize all investments to generate sales. This ratio emphasizes the efficiency of asset utilization. Businesses that use their assets effectively and efficiently will have a higher total asset turnover.

Total asset turnover is a ratio used to measure a company's ability to generate profits from its assets during a specific period. A higher ratio indicates that the assets are being used more efficiently to generate sales. The ratio is influenced by various factors, including sales, current assets (such as cash, securities, receivables, and inventory), and fixed assets (such as land, buildings, and machinery).

Return on Assets (ROA) is a profitability ratio that measures a company's ability to generate profits using its assets. It is calculated by dividing the profit after tax by the total assets. The ROA ratio provides insight into how effectively a business manages its investments to generate profits.

According to (Kasmir, 2019), return on assets provides several benefits, including determining the company's profit for a given period, comparing profits from the current and previous years, tracking profit development over time, assessing profit after using company capital, and evaluating the productivity of all company funds. (Kasmir, 2019), identifies several factors that affect the return on asset ratio, including an increase in asset turnover and net profit margin.

Liquidity is a ratio that measures an entity's ability to pay off its short-term liabilities based on its current assets. (Asniwati, 2020) explains that the liquidity ratio consists of current assets and current liabilities. The current ratio and the quick ratio are both measures of liquidity. They are used to assess a company's ability to pay short-term liabilities. The current ratio is the ratio of current assets to current liabilities, while the quick ratio is the ratio of current assets minus inventory to current liabilities.

Meanwhile, the quick ratio indicates an entity's ability to pay off short-term debt using only its current assets, excluding inventory. The standard quick ratio is 1.5. The activity ratio is a measure of a company's efficiency in using its assets to generate sales (Fajria, et al., (2016)). It shows the extent to which a company uses its resources, including assets and inventory.

One of the activity ratios is:

- a) Total Asset Turnover Total asset turnover increases.

Evaluate a company's effectiveness in utilizing all available activities to calculate product sales and generate profits.

- b) Fixed Asset Turnover Fixed asset turnover increases.

The fixed asset turnover ratio measures a company's ability to generate sales based on the assets it owns. A higher ratio is an indication of effective management of assets. Based on the above theory and framework, the hypothesis for this research is as follows.

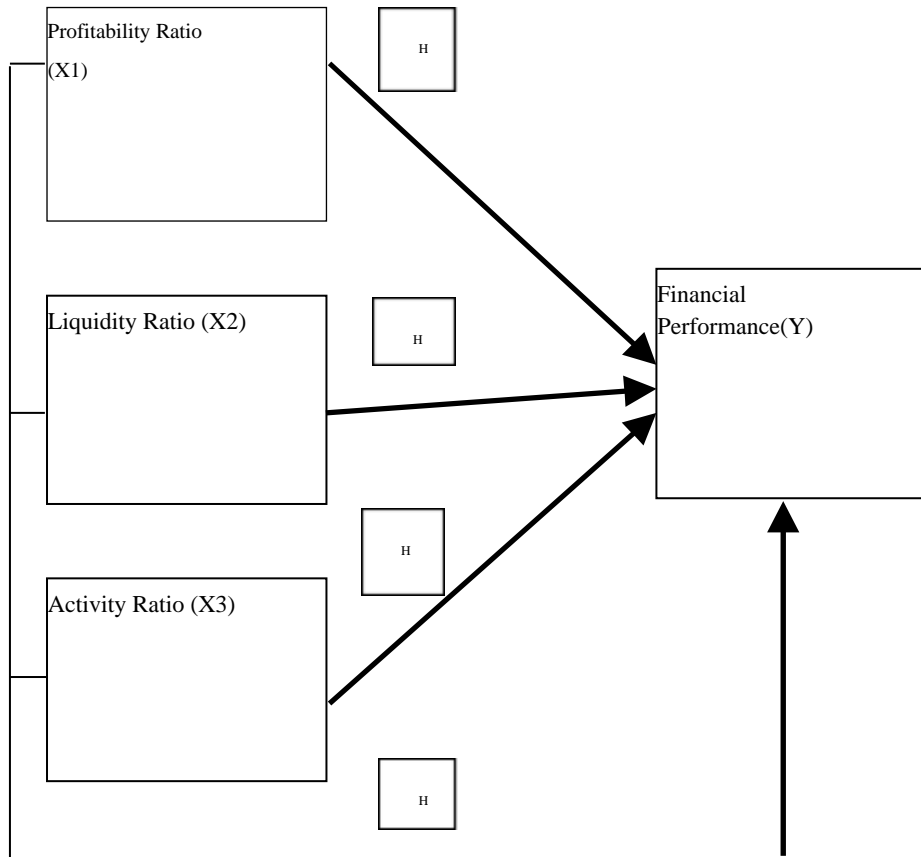


Figure 1. Framework of Thought Based on setting

H1: Provisional estimates of the profitability ratio significantly impact the financial performance of the company.

H2: Provisional concerns regarding the liquidity ratio significantly impact the financial performance of the company.

H3: There is a temporary suspicion that the activity ratio has a significant impact on the financial performance of the company.

H4: Temporary estimates of profitability, liquidity, and activity ratios can significantly impact a company's financial performance. It is important to note that these estimates should be objective and not based on subjective evaluations.

METHOD



Graphic 1. Quantitative Research Method

This study employs a quantitative research design that utilizes secondary data obtained from manufacturing companies. The sampling technique used is purposive sampling, which involves selecting samples based on specific criteria. The required data for this study consists of annual financial reports. Based on the financial report data, the author conducts multiple linear analyses to test the F-test, t-test, and R2 determination test. The population used in conducting this research with the research object being manufacturing companies with a total of 26 companies. The sampling technique is purposive sampling. The author's criteria for sampling are as follows:

- a. Manufacturing companies in the food and beverage sub-sector have been Tbk for at least the last 5 years.
- b. The company always experiences profits (profit) in the last 5 years or consecutively

Based on the criteria contained above, there are 10 companies that can be used as samples in the research.

Financial ratios are independent or free variables. Based on the narrative (Suhardi, et al., 2018), the independent variable is a variable that determines the direction or change related to the related variable, as follows:

- a. Profitability is calculated using Return On Assets (ROA)(X1), with the following formula:

$$\text{ROA} = \frac{\text{Net Profit} \times 100\%}{\text{Total Assets}}$$

- b. Liquidity is calculated using the Current Ratio (X2), with the following formula:

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

Current Liabilities

c. Activities calculated using Total Asset Turnover (X3), with the following formula:

$$\text{Total Assets: } \frac{\text{Sales} \times 100\%}{\text{Total Assets}}$$

The related (dependent) variable in this research is Financial Performance which is calculated using Profit Margin. The data collection technique in this research is by collecting secondary data, namely financial reports of manufacturing companies.

RESEARCH RESULTS AND DISCUSSION

Descriptive Analysis

Minimum, maximum, average and standard deviation values are summarized in this test.

Descriptive Statistics					
N		Minimum	Maximum	Mean	Std. Deviation
X1_ROA	50	1.60	52.67	13.2060	10.39856
X2_CURRENT RATIO	50	58.00%	864.00%	277.8468%	198.90474%
X3_PER_TOTAL_ASSETS	50	.06	3.10	1.2182	.62433
Y_PROFIT_MARGIN	50	1.48	39.01	12.8572	10.81218
Valid N (listwise)	50				

Tabel 1. Descriptive Statistics

The variable ROA (Return On Assets) has a standard deviation of 10.398556, with a minimum value of 1.60, a maximum value of 52.65 and an average value of 13.2060. The Current Ratio variable has a standard deviation of 198.90474%, with a minimum value of 58.00%, a maximum value of 864.00% and an average value of 277.8468%. The total asset turnover variable has a standard deviation of 0.62433, with a minimum value of 0.06, a maximum value of 3.10, and an average value of 1.2182. Meanwhile, the Profit Margin has a standard deviation of 10.81218. The minimum value is 1.48, the maximum value is 39.01 and the average value is 12.8572.

Multicollinearity Test

The multicollinearity test commonly uses a tolerance value of ≤ 0.10 or a VIF value of ≥ 10 . If the VIF value is less than 10, it indicates the presence of multicollinearity, which means a strong relationship between the independent variables. And the tolerance value has a number > 10 , it can be said that there are no symptoms of multicollinearity.

Coefficients ^a			
Model		Collinearity Tolerance	Statistics VIF
1	X1_ROA	.978	1.022
	X2_CURRENT RATIO	.967	1.034
	X3_PER_TOTAL_ASSETS	.965	1.036
a. Dependent Variable: Y_PROFIT_MARGIN			

Tabel 2. Multicollinearity Test Results

Heteroscedasticity Test

The author employs the Scatter-plot test in the heteroscedasticity test to determine whether symptoms of heteroscedasticity are present. This test is used to determine the intercorrelation between independent variables.

The test should not show a clear pattern or dots spread above and below, indicating the absence of heteroscedasticity in the regression model, as noted by (Haposan, 2020).

Autocorrelation Test

For the Autocorrelation Test, this study used the Durbin-Watson DW test.

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.958 ^a	.918	.912	2.40463	1.794

- a. Predictors: (Constant). Lag_X3. Lag_X1. Lag_X2
- b. Dependent Variable: Lag_Y

With a sample size of 50 (n) and 3 independent variables (k=3), the Durbin-Watson value from the regression analysis at a significance level of 5% is 1.794. Therefore, the Durbin-Watson value falls within the interval of 1.6739, indicating that the multiple regression model does not exhibit symptoms of autocorrelation.

Multiple Linear Regression Analysis

The multicollinearity test commonly uses a tolerance value of ≤ 0.10 or a VIF value of ≥ 10 . If the VIF value is less than 10, it indicates the presence of multicollinearity, which means a strong relationship between the independent variables. Conversely, if the tolerance value is greater than 10, there are no signs of multicollinearity.

Coefficients^a

Model	Unstandardized Coefficients			Standardized Coefficients Beta	T	Sig.
	B		Std. Error			
1	(Constant)	3.318	1.176		2.821	.007
	X1_ROA	.801	.037	.771	21.728	.000
	X2_CURRENT RATIO	.019	.002	.345	9.686	.000
	X3_PER_TOTAL_ASSE TS	-5.138	.618	-.297	-8.308	.000

- a. Dependent Variable: Y_PROFIT_MARGIN

The multicollinearity test commonly uses a tolerance value of ≤ 0.10 or a VIF value of ≥ 10 . If the VIF value is less than 10, it indicates the presence of multicollinearity, which means a strong relationship between the independent variables. Conversely, if the tolerance value is greater than 10, there are no signs of multicollinearity.

T- Test

Coefficients^a

Model	Unstandardized Coefficients			Standard- ized Coeffi-cients Beta	T	Sig.
	B		Std. Error			
1	(Constant)	3.318	1.176		2.821	.007
	X1_ROA	.801	.037	.771	21.728	.000
	X2_CURRENT RATIO	.019	.002	.345	9.686	.000
	X3_PER_TOTAL_ASSETS	-5.138	.618	-.297	-8.308	.000

- a. Dependent Variable: Y_PROFIT_MARGIN

The T test shows how far the influence of individual independent variables is in the variation of the related variable. It is known that the t table at a significance of $0.05/2 = 0.025$ (2-sided test) is obtained at 2.013 or -2.013 with degrees of freedom $df = n - k - 1$ or $df = 50 - 3 - 1 = 46$. Based on the table above, it can be concluded that:

- Roa has a sig value of $0.000 < 0.05$ and a calculated t value of $21.728 > t$ table has a significant effect on financial performance.
- The Current Ratio value is sig $0.000 < 0.05$ and the calculated t value is $9.686 > t$ table 2.013. So the current ratio partially has a significant effect on financial performance.
- Total Asset Turnover is sig $0.000 < 0.05$ and the calculated t value is $-8.308 > t$ table - 2.013. So total asset turnover partially has a significant effect on financial performance.

F-Test

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5404.011	3	1801.337	255.546	.000 ^b
	Residual	324.252	46	7.049		
	Total	5728.2	49			

a. Dependent Variable: Y_PROFIT_MARGIN

b. Predictors: (Constant), X3_PER_TOTAL_ASSETS, X1_ROA, X2_CURRENT_RATIO

Based on the ANOVA table below, the F-table value is 2.807, while the calculated F-value is 255.54. This indicates that the calculated F-value is greater than the table F-value. With a significance value of $0.000 < 0.05$, it can be concluded that ROA, Current Ratio, and Total Asset Turnover have a simultaneous influence on financial performance.

R2 Determination Test

Model Summary^b

Model	R	R Square	Adjusted RSquare	Std. Error of the Estimate
1	.971 ^a	.943	.940	2.65499

a. Predictors: (Constant), X3_PER_TOTAL_AKTIVA, X1_ROA, X2_CURRENT_RATIO

b. Dependent Variable: Y_PROFIT_MARGIN

The coefficient of determination R² is 0.943, indicating that 94% of the variation in the dependent variable can be explained by the independent variables ROA (X1), Current Ratio (X2), and total asset turnover (X3). The remaining 0.6% is influenced by other unexamined factors.

The first hypothesis (H1) posits a significant positive influence of ROA on financial performance. The t-test results show that the t-value is 21.728, which is greater than the t-table value of 2.013, and the significance value is 0.000, which is less than 0.05. Therefore, it can be concluded that ROA has a significant positive influence on the financial performance of manufacturing companies in Indonesia.

Based on the second hypothesis, there is a significant correlation between the current ratio variable and financial performance. The t-test results indicate that the t-value is 9.686, which is greater than the critical value of 2.013, and the p-value is 0.000, which is less than 0.05. Therefore, it can be concluded that the current ratio has a significant positive impact on the financial performance of food and beverage manufacturing companies listed on the Indonesia Stock Exchange. The research findings align with (Mariyanti, 2019) previous study, which indicated that the Current Ratio has a partial impact on financial performance. This suggests that fluctuations in a company's financial performance can be influenced by changes in its current ratio.

The third hypothesis demonstrates a significant correlation between the Total Asset Turnover variable and financial performance. The t-test results indicate that the t count is 8.038, which is greater than the t table value of -2.013, and the significant value is 0.000, which is less than 0.05. Therefore, it can be concluded that in the third hypothesis (H3) of this research, total asset turnover has a significant positive influence on the financial performance of manufacturing companies. The research findings are consistent with prior studies conducted by (Budiang, et al, 2017), which indicated that partial turnover has a significant impact.

CONCLUSIONS

The purpose of this research was the investigation of the effect of return on assets (ROA), current ratio and total asset turnover on financial performance. The author's research findings indicate that Return On Assets (ROA) has a significant effect on financial performance, as evidenced by a significant value of $0.000 < 0.05$ and a t table value of $21.728 > 2.013$. The Current Ratio has a significant effect on financial performance, as evidenced by its significant value of $0.000 < 0.05$ and a t table value of $9.686 > 2.013$. Similarly, Total Asset Turnover has an influence on financial performance, as indicated by its significant value of $0.000 < 0.05$ and a t table value of $-8.308 > -2.013$. The financial performance is significantly influenced by Return On Assets, Current Ratio, and Total Asset Turnover. These variables obtained a significant value of $0.000 < 0.05$ and an f table value of $2.807 > 255.546$ when analyzed simultaneously.

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