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The Effect of Current Ratio and Total Assets Turnover on Return on Assets at PT Merck Indonesia Tbk for the Period of 2016-2023

Muchamad Fahrul Fauji
STIE PASIM SUKABUMI
Corresponding Author: Muchamad Fahrul Fauji alfaqih.much@gmail.com

A R T I C L E I N F O

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A B S T R A C T

For the years 2016–2023, this study set out to analyse PT MERCK Tbk's Return On Assets (ROA) and how the Current Ratio and Total Asset Turnover impacted it. A descriptive associative technique is used in the study procedure, which is quantitative in nature. Secondary data extracted from PT MERCK Tbk's financial filings constitute the study's population. The quarterly financial statements of PT MERCK Tbk from 2016 to 2023 were used as the basis for the sample selection process, which used non-probability sampling using purposive sampling techniques. Multiple linear regression, t-tests, F-tests, coefficients of determination, and Pearson product-moment correlation analyses were used to assess the impact analysis. While the Total Asset Turnover (TATO) did not have any partial effect on Return On Assets (ROA), the Current Ratio did, according to the studies performed in this research. When used in conjunction, the Current Ratio and Total Asset Turnover (TATO) do not affect Return on Assets (ROA)

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INTRODUCTION

As an industrial sector that plays an important role in improving public health and driving the economy as a whole, the pharmaceutical industry is a pillar of the national economy. Here, the pharmaceutical business does more than just make various health products that help prevent and treat diseases; it also creates jobs, increases innovation, and contributes to global trade.

There are several reasons for the slowdown in the success of the pharmaceutical industry in 2022. One of them is the decline in public demand for pharmaceutical products as the country recovers from the COVID-19 pandemic. This situation provides an interesting background for research, especially in determining how the financial performance of pharmaceutical companies is affected after the epidemic. Especially at PT Merck Indonesia Tbk which always strives to be the best in its field.

Effective financial management is a key component for pharmaceutical businesses to compete in this competition. To maintain stable finances and minimize risk, a thorough analysis of investment plans, budget planning, and fund management is needed. The role of financial management in adapting to changing economic conditions and industrial accidents is a key component in understanding how the financial performance of pharmaceutical businesses evolves over time.

In addition to maximizing revenue and increasing shareholder welfare, business financial administration seeks to optimize the use of existing resources, especially those related to money (Mokhamad Anwar in Reva Dwi Farlina, 2022: 5).

Analyzing economic reports using financial ratios is one of the needs to meet the goals of business financial administration. This study will use the CR economic ratio for liquidity, the TATO ratio for activity, and the ROA ratio for profitability. (PT Merck Indonesia Tbk), 2016–2023.

Kasmir (2022: 202) states that ROA is a measure of how efficiently a company uses its owned and borrowed resources. The larger the ratio, the better, and vice versa. This is because better ROA means more profit for the business.
Based on the facts and hypotheses above, the author is interested in investigating the impact of CR and TATO on ROA at PT Merck Tbk from 2016 to 2023.

LITERATURE REVIEW

Kr

This ratio is a measure of a company's liquidity that helps cover its short-term debts and commitments (Kasmir, 2022: 134). Simply put, this ratio describes the level of liquid assets that can be used to pay off short-term debts that must be paid immediately. The measure of a business's buffer zone is the current ratio. Take the total amount of current assets and divide it by the total amount of current liabilities to get the current ratio.

Total Asset Turnover

The frequency with which an organization transfers all of its assets is measured by TATO, as expressed by Kasmir (2022: 185). Basically, this is a measure of sales generated per unit of assets owned by the company which is shown as a ratio. The greater the TATO, the better the company's ability to convert its assets into profits.

Return on Assets (ROA)

Kasmir (2022: 203) states that this ratio measures the return on investment relative to the total amount of assets used by the organization. Management efficiency in overseeing the company's investments is also reflected in ROA. The efficiency of the use of equity and borrowed money made by the company is reflected in its investment results. This ratio is better if it is bigger and worse if it is lower. That is, this ratio is used to evaluate the effectiveness of business activities as a whole.

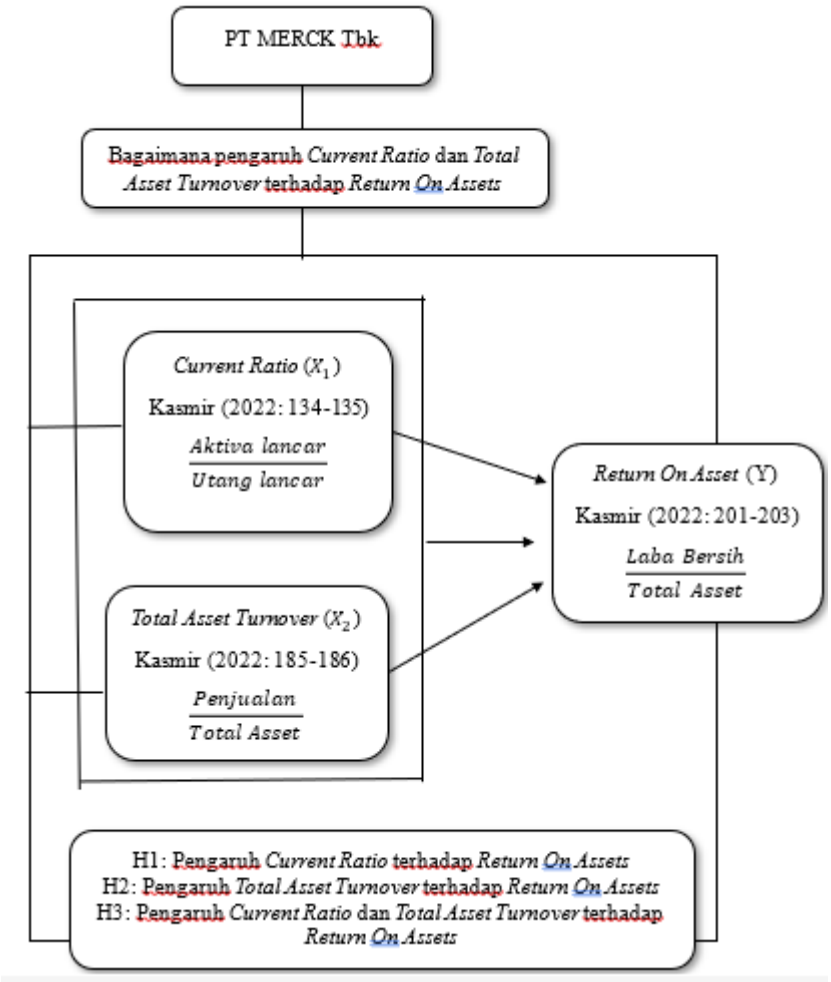

Figure 1. Conceptual Framework
Data Source: Data Processed by the Author (2024)

METHODOLOGY

Financial records from the company during a certain period of time are used as research data for this quantitative study. This study uses the financial statements of PT Merck Tbk as its population and a nonprobability sampling strategy based on a purposive sampling approach for its sampling procedure. Financial statements are used as samples for this study, with a total of 32 samples covering the years 2016–2023.

RESULT

Classical Assumption Test

Researchers use autocorrelation, heteroscedasticity, multicollinearity, and normality tests in traditional assumption tests.

Normality Test

The purpose of the normality test is to determine whether the dependent and independent factors of the regression model are normally distributed. Among the techniques used in the normality test are:

- **Histogram**

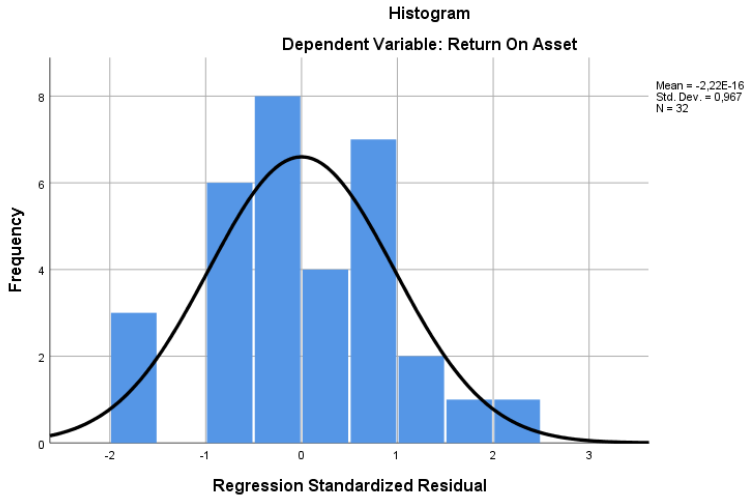

Figure 2. Histogram Graph Results
Source: SPSS 27 Output (2024)

The data distribution forms a bell shape, not biased to the left or right, according to Figure 2 is a histogram graph that is considered normal.

Normal Probability Plot

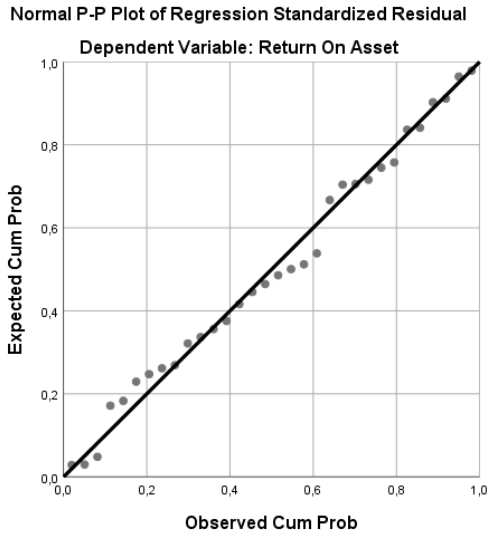

Figure 3. Normal Probability Plot
Source: SPSS 27 Output (2024)

Figure 3 shows that the data points tend to follow the diagonal line, which means the data is normally distributed.

- **Kolmogorov -Smirnov**

Use the Kolmogorov Smirnov test statistical analysis to support the normality test, which is supported by the histogram graph and pp plot shown earlier.

Table 1. Test Results *Kolmogorov-Smirnov*

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		32
Normal Parameters[a,b]	Mean	,0000000
	Std. Deviation	2,08232314
Most Extreme Differences	Absolute	,085
	Positive	,085
	Negative	-,070
Test Statistic		,085
Asymp. Sig. (2-tailed)		,200[c,d]

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

d. This is a lower bound of the true significance.

Source: SPSS 27 Output (2024)

The data in this study are normally distributed, with an Asym Sig (2-tailed) value of 0.200 (more than 0.05), as seen in the previous table.

Multicollinearity Test

Analyzing the prediction model for the existence of a significant relationship between one or more independent factors is the purpose of the multicollinearity test. The presence or absence of multicollinearity in the model is confirmed by this technique.

Table 2. Multicollinearity Test Results

Coefficients[a]

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	CR	,838	1,193
	TATO	,838	1,193

a. Dependent Variable: Return On Asset

Source: SPSS 27 Output (2024)

The tolerance value of the CR and TATO factors is 0.838, more than 0.10 based on table 2 above. Next, the CR and TATO factors have a VIF value below 10.00, which is 1.193. Therefore, the multicollinearity test fails or the regression model does not show multicollinearity.

Heteroscedasticity Test

To ensure that the regression analysis is free from bias caused by inconsistent data variance, a heteroscedasticity test is carried out. The residual variance does not remain constant across all independent factor values, a condition known as heteroscedasticity. Researchers in this study used the Scatterplots model heteroscedasticity test.

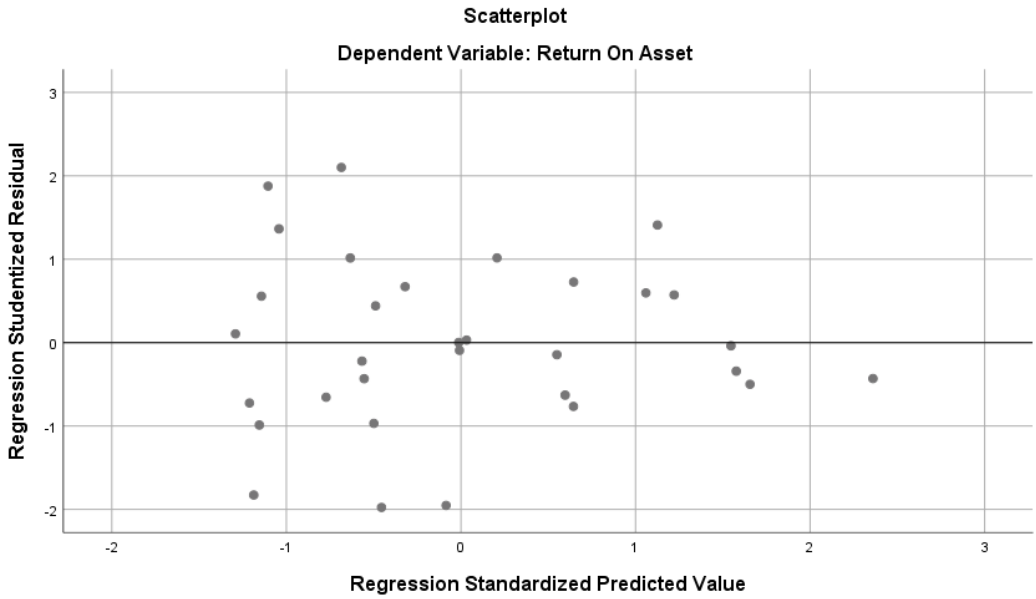

Figure 5. Heteroscedasticity Test Results
Source: SPSS 27 Output (2024)

The points on the graph are not only clustered above or below zero, but also spread above and below, as seen in Figure 5 above, thus eliminating the possibility of heteroscedasticity.

Autocorrelation Test

The purpose of the autocorrelation test in the linear regression model is to find out whether the contamination error in period t and the influencing error in period t-1 are correlated (previously). The autocorrelation problem is what you get when there is correlation. We use the DW test as our autocorrelation statistic.

Table 3. Autocorrelation Test Results

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,372[a]	,138	,079	2,15293	1,702

a. Predictors: (Constant), TATO, CR

b. Dependent Variable: Return On Asset

Source: SPSS 27 Output (2024)

It can be determined as 1.5736 < 1.702 < 4-1.5736 using data from this table, which shows DW with a value of 1.702. The dl value of 1.3093 and the du value of 1.5736 further support the calculation. We can conclude that the regression model is free from autocorrelation problems from these findings.

Descriptive Analysis

The purpose of descriptive statistics at PT Telekomunikasi Indonesia Tbk (Persero) is to provide a synopsis or description of the data seen through the following metrics: NPM, TATO, ROA, minimum, maximum, average (mean), and standard deviation.

Table 4. Results of Descriptive Analysis

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
CR	32	137	574	317,88	94,732
TATO	32	13	142	66,56	35,995
Return On Asset	32	-,74	7,67	3,8284	2,24287
Valid N (listwise)	32				

Source: SPSS 27 Output (2024)

The CR findings obtained from 32 data points have a range of values in table 4, with an average of 317.88%, a minimum of 137%, a maximum of 574%, and a standard deviation of 94.732.

With 32 observations, the TATO factor ranges from a normal value of 66.56% to a maximum of 142%, with a standard deviation of 35.995%.

The return on assets (ROA) factor calculated using 32 data ranges from an average of 3.8284% to a maximum of 7.67% with a variance of 2.24287%. The smallest value is -0.74% and the largest value is 7.67%.

Correlation Analysis

Finding the importance of the relationship between the dependent factor (ROA) and the independent factors (CR and TATO) is the purpose of coincidence analysis. Researchers in this study used Pearson's product moment evaluation.

Table 5. Results of Correlation Analysis of CR against ROA

Correlations

		CR	ROA
CR	Pearson Correlation	1	,316
	Sig. (2-tailed)		,078
	N	32	32
ROA	Pearson Correlation	,316	1
	Sig. (2-tailed)	,078	
	N	32	32

Source: SPSS 27 Output (2024)

In the previous table, we can see the results of the investigation using the Pearson Connection test. This shows that the relationship between CR (X1) and ROA (Y) has a low and unidirectional relationship with a correlation value of r = 0.316 which is between 0.200 and 0.399. Since the correlation is positive, we can expect a slight increase in ROA along with the increase in CR.

Table 6. Results of TATO Correlation Analysis on ROA

Correlations

		TATO	ROA
TATO	Pearson Correlation	1	-,051
	Sig. (2-tailed)		,780
	N	32	32
ROA	Pearson Correlation	-,051	1
	Sig. (2-tailed)	,780	
	N	32	32

Source: SPSS 27 Output (2024)

The results of the Correlation test value analysis can be seen in the table above. The correlation coefficient (r = -0.051) lies between the range of 0.00 and 0.199, indicating a weak and inverse relationship between TATO (X2) and ROA (Y). Because the relationship is negative, we can expect ROA to decrease as TATO increases.

Determination coefficient (R 2)

Efficiency Level By calculating and analyzing the prediction coefficient (KD) and looking at the R 2 value, we can estimate the extent of the role of CR and TATO in explaining and predicting ROA.

Table 7. Results of the determination coefficient test

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,372[a]	,138	,079	2,15293

Source: SPSS 27 Output (2024)

The following are the results of the determination coefficient test based on table 7:

KD=0,372 ^{2} X 100%

KD=0,138 X 100%

KD=13,8%

The KD figure of 0.138 or 13.8% can be seen from the calculation results above. Thus, CR and TATO contribute 13.8% to ROA, and the remaining 86.2% is influenced by other factors (100% - 13.8%).

Multiple Linear Regression

To determine the strength and direction of the relationship between independent and dependent factors, researchers use a multiple linear regression analysis model. The research test uses multiple linear regression.

Table 8. Results of Multiple Linear Analysis

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	1,688	1,369		1,233	,227
	CR	,010	,004	,402	2,134	,041
	TATO	-,013	,012	-,213	-1,131	,267

a. Dependent Variable: ROA

Source: SPSS 27 Output (2024)

You can write the prediction equation as follows using the constant value (a) of 1.688, CR (b1) of 0.010, and TATO (b2) of -0.013, all obtained from the output results:

you=1.688+0.010X 1 - 0.013X 2

Then the regression equation can be translated as follows:

1. The overall ROA is 1.688 if CR and TATO are both 0. This is because the constant (a) is 1.688.
2. The positive correlation coefficient result (b1) for CR (X1) is 0.010. If the Sales component (X1) increases by 1% and the TATO value (X2) remains the same, then ROA will increase by 0.010% which means that the correlation between CR and ROA is positive.
3. With a value of -0.013, the regression coefficient (b2) for CR (X2) is clearly negative. This shows that TATO and ROA are inversely related; that is, for a certain amount of CR (X1), a 1% increase in TATO (X2) will result in a loss of ROA of 0.013%. Lower ROA is associated with greater TATO.

Hypothesis Testing

- **t-Test (Partial Test)**

To find out whether the independent and dependent factors are somewhat related, the t-test is used.

Table 9. T-Test Results (Partial)

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	1,688	1,369		1,233	,227
	CR	,010	,004	,402	2,134	,041
	TATO	-,013	,012	-,213	-1,131	,267

a. Dependent Variable: ROA

Source: SPSS 27 Output (2024)

The CR value of 0.041 is less than 0.05 (Sig. <α), as seen in the table above. Because the t-table value is 2.042 for α = 0.05 and the t-count is 2.134, indicating that the t-count> t-table or 2.134> 2.042, it can be concluded that CR has a significant effect on ROA. This shows that CR has an effect on ROA, because Ha is accepted and H0 is rejected.

Based on the data in the table, TATO has a significance level of 0.267 more than 0.05 (Sig.> α), and a t-count of -1.131. Given α = 0.05 and the t-table value of 2.042 with n - k (32 - 2 = 30), it can be concluded that TATO does not have a significant effect on ROA at PT MERCK Tbk, because t-count < t-table or -1.131 < 2.042. Thus, TATO does not affect ROA because Ha is rejected and H0 is accepted.

F Test (Simultaneous Testing)

Ensuring the simultaneous influence between independent and dependent factors is done using the F test.

Table 10. F Test Results (Simultaneous)

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	21,526	2	10,763	2,322	,116[b]
	Residual	134,418	29	4,635		
	Total	155,944	31			

a. Dependent Variable: ROA

b. Predictors: (Constant), TATO, CR

Source: SPSS 27 Output (2024)

Based on the data in the table, the significance level (Sig.) of 0.116 is more than 0.05, and the F-count is 2.322. On the other hand, the F-table value is 3.33, meaning that the F-count is smaller than the F-table or 2.322 is smaller than 3.33, by considering the following: df (n1) = k - 1 (3 - 1 = 2), and df (n2) = n - k (32 - 3 = 29). This finding indicates that ROA is not affected by CR and TATO when used together. The results of the study indicate that TATO has no effect on ROA, resulting in the acceptance of H0 and the rejection of Ha.

DISCUSSION

The Effect of CR on ROA

A weak but positive relationship between CR and ROA is indicated by a correlation value of 0.316 in the Pearson correlation test. This figure is in the coefficient range of 0.20 to 0.399, indicating a small level of relationship between CR and ROA.

If we keep TATO constant, we find that for every 1% increase in CR, ROA will increase by 0.010%, according to the CR Regression Coefficient (b1) = 0.010. Furthermore, in the t-test for partial testing, CR has a significant effect on ROA as indicated by the significance value (Sig) = 0.041 <0.05 and tcount = 2.134> ttable = 2.042. Thus, CR has an effect on ROA at PT Merck Indonesia Tbk, because Ha is accepted and H0 is rejected.

The Effect of Total Assets Turnover on ROA

A very low and negative relationship between TATO and ROA is indicated by a correlation score of -0.051 in the Pearson correlation test. This figure is in the coefficient range of 0.00-0.199, indicating a weak negative relationship between TATO and ROA. When ROA increases, TATO decreases and vice versa.

Given that CR is constant, the TATO Linear Coefficient test produces the result (b2) = -0.013, which means that every 1% increase in TATO, ROA will decrease by 0.013%.

After that, TATO does not have a significant impact on ROA as a whole, as indicated by the substantial value (Sig) = 0.267> 0.05 and t-count = -1.131 <t-table = 2.042. So, it makes sense to accept H0 and reject Ha; this shows that TATO has no effect on ROA at PT Merck Indonesia Tbk.

The Effect of CR and TATO Against ROA

The Effect of CR and TATO on ROA

When combined, CR and TATO can only contribute 13.8% of the ROA variance, according to the Determination Coefficient (KD). Factors outside the scope of this investigation account for the remaining 86.2%. Substantial results (Sig) of 0.116 > 0.05 and Fcount of 2.322 < Ftable 3.33 indicate that CR and TATO do not have a significant effect on ROA in simultaneous evaluation. Therefore, it can be said that ROA of PT Merck Indonesia Tbk is not affected by CR and TATO at the same time Ha is rejected and H0 is approved.

CONCLUSION AND RECOMMENDATION

Increased CR

Although the correlation is weak (r = 0.316), the positive direction of the relationship suggests that ROA tends to grow as CR increases. Therefore, businesses may consider maintaining or increasing their CR. This can be done by maintaining a healthy cash flow and not letting your current liabilities exceed your current assets, and by not letting your current assets pile up if they are not productive.

TATO Evaluation

Increasing the efficiency of asset use does not always increase ROA, as indicated by the very weak and inverse relationship between TATO and ROA (r = -0.051). If businesses want to increase productivity without sacrificing profitability, they need to take a closer look at how their current assets are used in operations.

FUTURE STUDY

Many additional variables that affect ROA have not been investigated, as indicated by the coefficient of determination (R^2), which shows that CR and TATO only account for 13.8% of the variance in ROA. To find more elements that have a significant impact on ROA, further study is needed.

ACKNOWLEDGEMENTS

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Author The response you give should be commensurate with the kindness you receive, may Allah Subhanahu Waa Ta'ala bestow it upon you. There are still gaps and limitations in this research, and the author is aware of this. However, the author still hopes that the findings of this research will have real-world applications that can help academics, professionals, and policy makers.

Finally, the author provides assistance and inspiration to anyone interested in the study of economics and finance through this thesis. Ideally, the findings of this research are able to contribute, even if only a little, to the advancement of science.

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