

DETERMINAN RETURN ON ASSET: ANALISIS CURRENT RATIO DAN INVENTORY TURNOVER PADA PT KIMIA FARMA TBK

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Abstract

This study aims to analyze the influence of Current Ratio and Inventory Turnover on Return On Assets at PT Kimia Farma Tbk. Samples in this study were selected using purposive sampling techniques. The method used is a descriptive method with a quantitative approach. The data used are secondary data obtained from the financial statements of PT Kimia Farma Tbk for the period 2018–2024. The data analysis techniques used include Classical Assumption Test, Multiple Linear Regression Analysis, Coefficient of Determination, t-Test (partial), and F Test (simultaneous). The results show that partially, the Current Ratio has a significant effect on Return On Assets, which is evidenced by a t_{hitung} value of 5.763 greater than t_{tabel} 2.776 and a significance value of 0.004 which is smaller than 0.05. Meanwhile, Inventory Turnover partially did not have a significant effect on Return On Assets, with a t_{hitung} value of -0.841 which was smaller than t_{tabel} 2.776 and a significance value of 0.448 which was greater than 0.05. However, simultaneously, the Current Ratio and Inventory Turnover together have a significant effect on the Return On Assets, which is shown by the value of F_{hitung} of 49.646 greater than F_{tabel} of 5.79 with a significance value of 0.001 which is smaller than 0.05.

Keywords: Current Ratio; Inventory Turnover; Return On Assets;

1. INTRODUCTION

Indonesia's economy as a developing country is highly dependent on the role of State-Owned Enterprises (SOEs) which is one of the main pillars in encouraging economic growth and improving people's welfare. Among the various existing SOEs, PT Kimia Farma Tbk. has a very important position as an integrated health service company that operates from upstream to downstream, covering the industrial sector, distribution, retail, clinical laboratories, and health clinics. As a company listed on the stock exchange as well as a state-owned enterprise, Kimia Farma is not only expected to carry out effective business operations, but is also required to implement the principles of good corporate governance in accordance with the provisions contained in Law No. 19/2003 concerning SOEs. With strong support for research and development as well as CPOB, ISO 9001, and ISO 14001 certification, the company plays a key role as a pillar in the pharmaceutical industry in Indonesia.

The main purpose of establishing a company is to achieve profit as the main measure of its operational performance. This profit serves as business development capital as well as a barometer for investors and creditors to assess the company's future prospects. Therefore, Return On Asset (ROA) is a very crucial indicator of profitability because it measures the effectiveness of managing all assets in generating profits. In line with Agus Sartomo's (2014) view that profit reflects the company's ability to make a profit through sales, assets, and equity, management needs to understand the determining factors of ROA in order to develop the right company strategy.

The magnitude of the ROA is influenced by the company's financial and operational decisions, including the Current Ratio (CR) and Inventory Turnover (ITO) variables. The CR reflects the company's liquidity to settle short-term obligations to maintain creditor confidence and business stability. Meanwhile, the ITO measures the

efficiency of inventory management, where high stock turnover can reduce the risk of loss of goods and accelerate the return of working capital to cash.

Although theoretically these two ratios have an effect on ROA, in practice the results of the study still show inconsistencies. Some studies have found that too high a CR can actually reduce profits because idle funds are not used productively. In contrast, high ITO is generally associated with increased profitability. This phenomenon is what encourages researchers to not only look at "influences", but dig deeper as **determinants**—that is, determinants that really contribute significantly to the fluctuations in ROA at PT Kimia Farma Tbk during the 2018–2024 period.

Thus, this study seeks to empirically analyze whether Current Ratio and Inventory Turnover are valid determinants of Return On Asset, as well as how much each variable contributes in explaining the company's profitability performance

2. IMPLEMENTATION METHOD

This study uses a quantitative approach with an **associative descriptive method**. The quantitative approach was chosen because this study aims to test the causal relationship between numerically measured variables, as well as analyze the influence of independent variables on dependent variables through statistical data processing. The descriptive method is used to describe phenomena that occur in the research object based on the data collected, while the associative method is used to determine the relationship and influence between the variables studied.

According to Sugiyono (2019:127) "Population is a generalized area consisting of objects and subjects that have certain qualities and characteristics that are determined by the researcher to be studied and then conclusions are drawn. Based on this definition, the population referred to in this study is in the form of a Financial Statement at PT Kimia Farma Tbk.

The sample used in this thesis is a financial statement that includes a statement of PT Kimia Farma Tbk's financial position and profit and loss for the 2018-2024 period.

Data analysis techniques are methods or ways to get data into information so that the characteristics of the data become easy to understand and also useful for finding solutions to problems in a research. This research is a type of quantitative research, namely managing the company's secondary data using a descriptive analysis method. This method is used to determine whether or not there is an influence of independent variables (Current Ratio and Inventory Turnover) on dependent variables (Return On Asset) in this research. This research was carried out using the help of the Microsoft Excel program and significance using the SPSS program.

This Current Ratio is one of the liquidity ratios, but there are also Cash Ratios and Quick Ratios in the Liquidity ratio where the calculation is quite simple for creditors or interested people to find out the company's ability to pay this short-term debt. The definition of Current Ratio or Current Ratio according to Kasmir (2016:134) is "a current ratio to measure the company's ability to pay short-term obligations or debts that are immediately due when they are billed in their entirety". According to Martono (2012:55), the current ratio is a comparison between current assets (Current Assets) and current debts (Current Liabilities).

The current ratio can be formulated as follows:

$$\text{Current Ratio} = \frac{\text{Aktiva Lancar}}{\text{Hutang Lancar}} \times 100\%$$

According to Kasmir (2015:180), "inventory turnover is a ratio used to measure the number of times funds invested in this inventory rotate in a period". Inventory turnover consists of inventory components, cost of production and sales. The inventory turnover ratio is often a reference for production and sales departments. Through this ratio, they can work so that the products produced are not excessive. Inventory turnover is a ratio that measures how long inventory is stored until sold. Inventory turnover is a type of efficiency ratio that shows how effectively the inventory of goods is managed by comparing the Cost of Goods (COGS) with the average inventory for a period. This ratio is used to measure how long it takes to sell inventory. The inventory turnover ratio is part of an important financial ratio that is usually used as a reference for checking the company's financial health. The Inventory Turnover formula is as follows:

$$\text{Inventory Turnover} = \frac{\text{HPP}}{\text{Rata-Rata Persediaan}} \times 100\%$$

Return On Asset (ROA) is one of the profitability ratios. In financial analysis, this ratio is the center of attention because it is able to show the company's success in generating profits. Return On Asset can measure

the company's ability to generate profits in the future. The asset or asset in question is the entire company's assets obtained from its own capital or from foreign capital that the company has converted into company assets that are used for the company's survival. According to Fahmi (2012:98), Return On Asset looks at the extent to which the investment that has been invested is able to provide a return on profit as expected and the investment is actually the same as the company's assets that are invested or placed. The following Return On Asset can be calculated with the formula:

$$\text{Return On Asset} = \frac{\text{EAT}}{\text{Total Aktiva}} \times 100\%$$

3. RESULTS AND DISCUSSION

The results of descriptive statistical data processing with the help of SPSS are presented in the following table:

Table 1. Descriptive Statistics

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
CR	7	89.78	193.02	135.1700	39.15540
ITO	7	.46	3.14	1.9871	.91967
ROA	7	.09	7.82	3.6729	3.05414
Valid N (listwise)	7				

Sumber: Data Diolah dari SPSS v26

Based on the results of descriptive statistical data processing, an overview was obtained that during the observation period, the company's Current Ratio value was in the range of 89.78% to 193.02% with an average of 135.17%. This indicates that in general PT Kimia Farma Tbk has a fairly good ability to fulfill its short-term obligations, although there are significant fluctuations from year to year which is reflected in the standard deviation of 39.15.

Meanwhile, Inventory Turnover shows a minimum value of 0.46 times and a maximum value of 3.14 times with an average of 1.99 times. This figure shows that the company's inventory turnover is relatively low, which means that merchandise tends to be stored in warehouses for a long time before being sold. The standard deviation of 0.92 indicates variability in inventory management efficiency during the study period.

For dependent variables, the Return On Asset shows a very wide range, from a minimum value of 0.09% to a maximum value of 7.82% with an average of 3.67%. This fairly high fluctuation of ROA reflects the company's volatile profitability performance during the period 2018–2024, which is a major concern in this study.

The normality test was carried out in this study with the aim of finding out whether the regression model on independent variables and dependent variables in this study has a normal distribution or not. The following are the results of the normality test in the following table:

Table 2. Normality Test

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		7
Normal Parameters ^{a,b}	Mean	.0000000
	Std. Deviation	.60101364
Most Extreme Differences	Absolute	.245
	Positive	.245
	Negative	-.115
Test Statistic		.245
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.

Normality testing was performed using the Kolmogorov-Smirnov method to ensure that the residual data in the regression model were normally distributed. The test results showed an Asymp. Sig. (2-tailed) value of 0.200 which was well above the significance limit of 0.05. Thus, it can be concluded that the residual data is

normally distributed, so the regression model is feasible to use for further analysis.

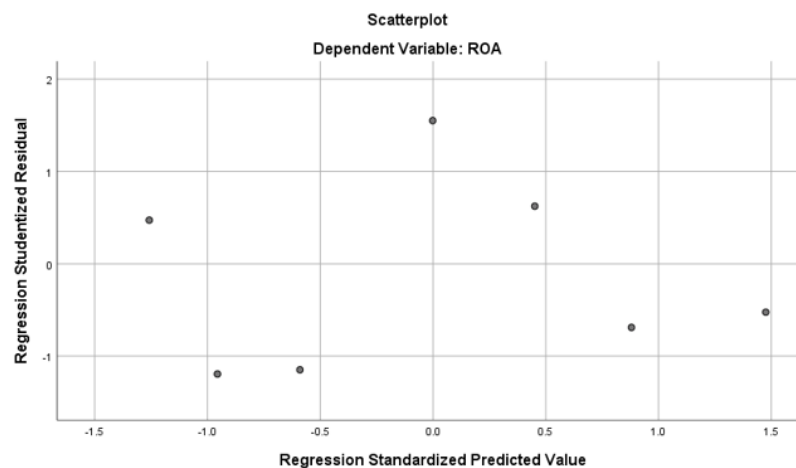
This test aims to detect a high correlation between independent variables. Based on the calculation results, the tolerance value for the two independent variables is 0.258 (> 0.10) and the VIF value is 3.883 (< 10). This condition shows that there are no symptoms of multicollinearity in the regression model, meaning that Current Ratio and Inventory Turnover can be tested simultaneously as determinants of ROA without any disturbance due to correlation between the two.

Table 3. Multicollinearity Test

		Coefficients ^a					Collinearity Statistics	
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Tolerance	VIF
		B	Std. Error	Beta				
1	(Constant)	-7.033	1.177		-5.974	.004		
	CR	.087	.015	1.117	5.763	.004	.258	3.883
	ITO	-.541	.644	-.163	-.841	.448	.258	3.883

a. Dependent Variable: ROA

Heteroscedasticity testing was performed by observing the pattern of the dots on the scatterplot graph. The results showed that the dots were randomly dispersed, did not form a specific pattern, and were scattered both above and below the zero on the Y-axis.



The autocorrelation test carried out in this study aims to find out whether there are autocorrelation symptoms or not in this study.

Table 4. Autocorrelation Test

Model Summary ^b					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.980 ^a	.961	.942	.73609	2.480

a. Predictors: (Constant), ITO, CR

b. Dependent Variable: ROA

To detect the presence of correlations between residuals in successive observation periods, the Durbin-Watson test was performed. The calculation results showed a Durbin-Watson value of 2.480. With the number of samples ($n = 7$) and the number of independent variables ($k = 2$), the values of $DU = 1.8964$ and $4-DU = 2.1036$ were obtained. Since the value of DW (2.480) is between DU and 4-DU, it can be concluded that there is no autocorrelation, either positive or negative, so that the regression model meets the assumption of non-autocorrelation.

The multiple linear regression analysis test aims to explain the magnitude of the influence of Current Ratio and Inventory Turnover on Return On Asset. The equation in this multiple linear regression test used to test the hypothesis in this study is $Y = a + bX_1 + bX_2$.

Table 5. Regression Analysis

Model	Coefficients ^a					Collinearity Statistics	
	Unstandardized Coefficients	Std. Error	Standardized Coefficients	t	Sig.		
1							
	(Constant)	-7.033	1.177		-5.974	.004	
	CR	.087	.015	1.117	5.763	.004	.258
	ITO	-.541	.644	-.163	-.841	.448	3.883

a. Dependent Variable: ROA

Based on table 4.10, the multiple linear regression equation is:

$$Y = -7.033 + 0.087X_1 - 0.541X_2$$

Description :

Y= Return On Asset

X1= Current Ratio

X2= Inventory Turnover

The interpretation of the equation is as follows:

1. **Constant (a) = -7.033:** This value indicates that if the Current Ratio and Inventory Turnover are equal to zero, then the ROA will be at -7.033%. Although this negative value is mathematically unrealistic in the company's operational context, it serves as a reference point in the regression equation.
2. **Current Ratio Regression Coefficient (X₁) = 0.087:** This positive coefficient indicates that every increase in the Current Ratio by one unit (1%), the ROA will increase by 0.087%. In other words, the higher the company's liquidity, which is reflected in the ability to pay short-term debts, the greater its contribution to increased profitability.
3. **Inventory Turnover Regression Coefficient (X₂) = -0.541:** This negative coefficient indicates that any increase in Inventory Turnover by one unit will actually decrease the ROA by 0.541%. This indicates that the efficiency of inventory turnover does not always have a positive impact on profitability, especially if the increase in turnover is not offset by an adequate profit margin.

If the t-count < the table and the significance value on the > variable is 0.05, it means that the individual free variable does not affect the bound variable, then H₀ is accepted. Likewise, if t calculates the ttable > and the significance value on the free variable < 0.05, then H₀ is rejected, meaning that partially or individually the independent variable affects the bound variable.

Table 6. T Test

Model	Coefficients ^a				
	Unstandardized Coefficients	Std. Error	Standardized Coefficients	t	Sig.
1					
	(Constant)	-7.033	1.177		-5.974
	CR	.087	.015	1.117	5.763
	ITO	-.541	.644	-.163	-.841

a. Dependent Variable: ROA

Based on table 4.11 of the data processing results above, it can be seen:

1. The results of the t-test showed that the Current Ratio had a significant influence on ROA. The t_{hitung} value obtained was 5.763 with a significance value of 0.004. Using the significance level of 5% ($\alpha = 0.05$) and the degree of freedom (dk) = 4, a value of t_{tabel} of 2.776 was obtained. Since t_{hitung} (5.763) > t_{tabel} (2.776) and significance value (0.004) < 0.05, the null hypothesis (H₀) was rejected and the alternative hypothesis (H₁) was accepted.

These findings confirm that liquidity measured through the Current Ratio is one of the important determinants in determining the level of ROA of PT Kimia Farma Tbk. The company's ability to meet its short-term obligations creates financial stability which in turn supports the achievement of more optimal profits. However, it should be noted that a current ratio that is too high can also indicate the existence of

unproductive idle funds, so management needs to maintain a balance of liquidity so as not to sacrifice potential profits

2. In contrast to the Current Ratio, the results of the t-test showed that Inventory Turnover had no significant effect on ROA. The t_{hitung} value obtained was -0.841 with a significance value of 0.448. Because $t_{\text{hitung}} (-0.841) < t_{\text{tabel}} (2.776)$ and significance value $(0.448) > 0.05$, the alternative hypothesis (H_2) was rejected. The insignificance of the effect of Inventory Turnover on ROA can be explained by several factors. First, the relatively low value of inventory turnover (an average of 1.99 times) indicates that the company has not been efficient in managing its inventory, so its impact on profitability has not been seen in real terms. Second, types of pharmaceutical products that have special characteristics, such as expiration periods and strict regulations, may cause high storage costs that reduce profit margins. Third, high inventory turnover is not always followed by an increase in profitable sales volume, especially in the event of discounts or price decreases to accelerate turnover, which can actually depress profits.

The results of the F test showed that simultaneously, the Current Ratio and Inventory Turnover had a significant effect on the ROA. The F_{hitung} value obtained was 49.646 with a significance value of 0.001. With a significance level of 5%, the F_{tabel} for the degree of freedom (2; 5) was 5.79. Since the $F_{\text{hitung}} (49.646) > F_{\text{tabel}} (5.79)$ and significance value $(0.001) < 0.05$, the null hypothesis (H_0) is rejected and the alternative hypothesis (H_1) is accepted.

Table 7. Test F

ANOVA ^a					
Model		Sum of Squares	df	Mean Square	F
1	Regression	53.799	2	26.900	49.646
	Residual	2.167	4	.542	
	Total	55.967	6		

a. Dependent Variable: ROA

b. Predictors: (Constant), ITO, CR

These findings confirm that the combination of liquidity management (Current Ratio) and operational efficiency (Inventory Turnover) together is a significant determinant of a company's profitability. Although Inventory Turnover is partially insignificant, in combination with Current Ratio, these two variables complement each other and make a significant contribution to ROA fluctuations. This confirms that profitability improvement strategies cannot rely on just one financial aspect, but require an integrated approach that considers various performance indicators simultaneously.

4. CONCLUSION

Based on the results of research and discussion on the influence of Current Ratio (CR) and Inventory Turnover (ITO) on Return On Asset (ROA) at PT Kimia Farma Tbk for the 2018–2024 period, the following conclusions can be drawn:

1. Partially, the Current Ratio has a significant effect on ROA. This is evidenced by the t_{hitung} value (5.763) which is greater than $t_{\text{tabel}} (2.776)$ and the significance value of 0.004 which is smaller than 0.05. Thus, increasing the company's liquidity through the management of current assets against current debt is proven to be able to affect the level of profitability measured by ROA.
2. Partially, Inventory Turnover has no significant effect on ROA. This is shown by a t_{hitung} value (-0.841) that is smaller than $t_{\text{tabel}} (2.776)$ and a significance value of 0.448 that is greater than 0.05. This means that the inventory turnover rate that occurred during the study period has not been able to have a real impact on the increase in the company's return on assets.
3. Together (simultaneously), Current Ratio and Inventory Turnover have a significant effect on Return On Asset. This is evidenced by the value of F_{hitung} (49.646) which is greater than $F_{\text{tabel}} (5.79)$ and a significance value of 0.001 which is smaller than 0.05. This indicates that the combination of liquidity management and inventory efficiency together is a valid determinant in explaining the fluctuations in the company's profitability.

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