



THE EFFECT OF DEBT TO EQUITY RATIO (DER), CURRENT ASSETS (CR), AND INVENTORY TURNOVER (ITO) ON RETURN ON ASSETS (ROA) AT PT. UNILEVER INDONESIA TBK.

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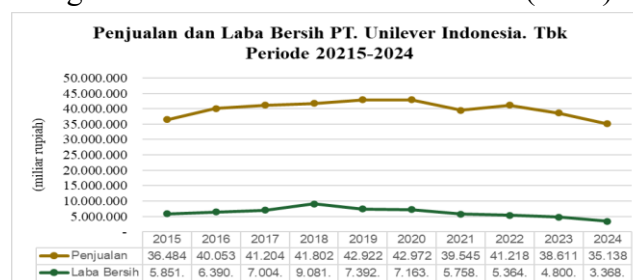
Abstract. This study aims to determine and analyze the effect of Debt to Equity Ratio (DER), Current Ratio (CR), and Inventory Turnover (ITO) on Return on Assets (ROA) at PT. Unilever Indonesia Tbk. for the period 2015-2024, both simultaneously and partially. The research method used is quantitative method with secondary data in the form of annual financial reports published on the Indonesia Stock Exchange (IDX). The analysis techniques used include classical assumption test, multiple linear regression analysis, coefficient of determination, simultaneous test (F), and partial test (t) with the help of SPSS 27. The results showed that simultaneously DER, CR, and ITO had a significant effect on ROA, but partially the three variables had no significant effect on ROA. Thus, this study confirms that the influence of financial factors on the profitability of PT. Unilever Indonesia Tbk. is more visible when tested together, while individually each variable has not shown a significant contribution.

Keywords: debt to equity ratio; current assets; inventory turnover; return on assets.

1. Introduction

The consumer goods industry in Indonesia plays an important role in supporting national economic growth because its products are directly related to people's daily needs. One of the largest companies in this sector is PT Unilever Indonesia Tbk, which is known through various leading brands in the field of household needs and personal care. As a multinational company with a large scale of operations, Unilever's profitability is a major concern for investors and stakeholders.

Return on Assets (ROA) is one way to measure the level of profitability of a company. ROA is a ratio to assess how effective a company is in generating net income by utilizing its total assets (Saputri et al., 2024). Based on the financial statements of PT Unilever Indonesia Tbk listed on the Indonesia Stock Exchange (IDX), it can be seen that the company's financial performance has decreased in recent years seen from the sales and net profit earned. This condition indicates that an increase in sales is not always followed by an increase in profits, and a decrease in sales further suppresses profitability. This phenomenon reflects the problem of efficient use of assets in generating profits, which is reflected through fluctuations in Return on Assets (ROA).



Source: Financial Statements (data processed by researchers)

Figure 1. Sales and Net Income of PT Unilever Indonesia Tbk.

One important factor is inventory management, which is reflected in Inventory Turnover (ITO). As a consumer goods company, inventory is the key to smooth operations and sales. In addition, Debt to Equity Ratio (DER) and Current Ratio (CR) are also thought to affect ROA. DER shows the company's funding structure, while CR illustrates the company's ability to meet short-term obligations. These three variables together reflect how operational efficiency, liquidity, and capital structure affect profitability.

However, previous research shows inconsistent results. There is research that states ITO has a significant effect on profitability (Saputri et al., 2024). Meanwhile, other studies state the opposite (Wulandari & Lubis, 2022). In addition, in other studies DER and CR have a significant effect on profitability (Ramdani & Nasfsiah, 2022). While other studies have found the effect to be insignificant (Magfiroh et al., 2024). This research gap opens up opportunities to re-examine the relationship between these three variables on ROA, especially in the context of large companies in the consumer goods sector.

Based on this, this research offers novelty by focusing on PT Unilever Indonesia Tbk as a case study, with an emphasis on the role of inventory management through ITO, and paying attention to DER and CR factors. This research has urgency because the results can make a practical contribution to management in managing inventory, capital, and liquidity more efficiently, and provide benefits for investors in evaluating the company's profitability prospects.

2. Literature Review

2.1 Signaling Theory

Signaling theory was first introduced by Michael Spence in 1973, and is used to explain how parties who have more information (management) convey signals to parties who have less information (investors). In the context of corporate finance, ratios such as Debt to Equity Ratio (DER), Current Ratio (CR), and Inventory Turnover (ITO) are forms of signals that reflect the risk, liquidity, and operational efficiency of the company. DER sends signals about the financing structure and the level of leverage used; CR signals the company's ability to meet short-term obligations; while ITO signals management's effectiveness in managing inventory and operating asset turnover. Investors interpret these three ratios as important information to assess the quality of company management. Return on Assets (ROA) then serves as an indicator of whether these signals are actually reflected in profitability performance. Thus, signaling theory provides a strong framework for understanding the relationship between DER, CR, and ITO to ROA, as well as how management uses financial information to influence market perceptions.

2.2 Debt to Equity Ratio (DER)

According to Kasmir (2019), Debt Equity Ratio (DER) is a ratio used to assess debt with equity. By using the DER ratio, companies can find out the ratio between debt and capital in company funding and how much the company's own capital is able to fulfill all its obligations (Seto et al., 2023). The higher the ratio, the higher the risk. The formula for finding the debt to equity ratio can be used the ratio between total debt and total equity as follows:

$$\text{DER} = \frac{\text{Total Debt}}{\text{Total Equity}}$$

2.3 Current Assets (CR)

According to Cashmere (2019), Current ratio is a ratio used to measure the company's ability to pay short-term obligations or debts that are due immediately at the time of collection. (Seto et al., 2023). A low Current Ratio (CR) indicates a problem in liquidity, on the other hand, a Current Ratio (CR) that is too high is also not good, because it shows a lot of idle funds (Lutfi et al., 2024). The formula for finding the Current Ratio (CR) can be used as follows:

$$CR = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

2.4 Inventory Turnover (ITO)

According to E Maurilla (2017) that what is meant by inventory turnover is: "Turnover ratios divide sales by some Assets: Sales/Varoius Assets. As the name implies, these ratios show how many times the particular Assets is "turned over" during the year. Here is the inventory turnover ratio." (Mardiana et al., 2022). If inventory turnover is low, it indicates that there are many unused items, while if inventory turnover is high, it means that the goods are sold quickly and the company is able to manage inventory effectively. The formula for finding Inventory turnover:

$$ITO = \frac{\text{Cost of Goods Sold}}{\text{Inventory}}$$

2.5 Return on Assetss (ROA)

Return on Assets (ROA) is one way to assess the performance of a company. Return on Assets (ROA) is a ratio used to measure the company's management ability to obtain net income from managing its assets (Via Rahma Yanti & Ninik Dwi Atmini, 2023). If ROA is negative, this indicates that the company is experiencing losses, thus indicating that the total capital invested is not sufficient to generate profits. The Return on Assets (ROA) can be formulated as follows:

$$ROA = \frac{\text{Earning After Tax}}{\text{Total Assets}}$$

3. Research Methods

The research object used in this study is PT Unilever Indonesia Tbk. with the scope of research on Debt to Equity Ratio (DER), Current Ratio (CR), Inventory Turnover (ITO), and Return on Assets (ROA). PT Unilever Indonesia Tbk. is one of the largest consumer goods companies in Indonesia engaged in the production of household needs and personal care. The company has long been operating in Indonesia and is part of the Unilever Group, a multinational company based in London and Rotterdam. With its strong market position and extensive brand portfolio, Unilever has a significant influence on the national consumer goods industry.

This research uses quantitative methods, with a descriptive approach to describe the company's financial condition and a verification approach to test the influence between variables. Research data obtained from the annual financial statements of PT Unilever Indonesia Tbk listed on the Indonesia Stock Exchange (IDX) during the research period. In data processing, this study used SPSS version 27 software with data analysis techniques in the form of classical assumption tests, multiple linear regression analysis,

The Effect of Debt to Equity Ratio (DER), Current Assets (CR), And Inventory Turnover (ITO) on Return on Assets (ROA) at PT. Unilever Indonesia Tbk.

coefficient of determination, simultaneous test (F), and partial test (t) to determine the effect of independent variables on the dependent variable.

4. Results And Discussionan

Data on Debt to Equity Ratio (DER), Current Ratio (CR), Inventory Turnover (ITO), and Return on Assets (ROA) at PT Unilever Indonesia Tbk for the period 2015-2024 can be seen in Table 1:

Table 1. Debt to Equity Ratio (DER), Current Ratio (CR), Inventory Turnover (ITO), and Return on Assets (ROA) at PT Unilever Indonesia Tbk for the period 2015-2024

Years	DER (%)	CR (%)	ITO (times)	ROA (%)
2015	225.85	65.40	7.76	39.00
2016	255.97	60.56	8.45	39.36
2017	265.46	63.37	8.35	39.29
2018	157.62	74.77	7.79	47.26
2019	290.95	65.29	8.60	36.81
2020	315.90	66.09	8.33	34.79
2021	341.27	61.41	8.12	29.08
2022	358.27	60.82	8.44	28.70
2023	392.84	55.17	8.02	27.45
2024	646.59	44.64	7.35	20.60

Source: Financial Statements of PT Unilever Indonesia Tbk.

4.1 Classical Assumption Test

To avoid deviations in the multiple linear regression model, the classical assumption test is carried out first. In order for the statistical calculation results to be more accurate, this research analysis uses SPSS version 27. The classical assumption test carried out on the multiple linear regression model is as follows.

4.2 Normality Test

Data normality test can be done through the statistical test (Kolmogorov-Smirnov), provided that if the One-Sample Komolgorov-Smirnov test results produce a significance value > 0.05 then the data is normally distributed. Based on data processing, the normality test results are as follows:

One-Sample Kolmogorov-Smirnov Test			
			Unstandardiz ed Residual
N			10
Normal Parameters ^{a,b}	Mean	.0000000	
	Std. Deviation	2.67780211	
Most Extreme Differences	Absolute	.233	
	Positive	.166	
	Negative	-.233	
Test Statistic			.233
Asymp. Sig. (2-tailed) ^c			.134
Monte Carlo Sig. (2-tailed) ^d	Sig.	.129	
	99% Confidence Interval	Lower Bound	.121
		Upper Bound	.138

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

d. Lilliefors' method based on 10000 Monte Carlo samples with starting seed 2000000.

Source: data processed by researchers

Figure 2. One-Sample Komolgorov-Smirnov

The Effect of Debt to Equity Ratio (DER), Current Assets (CR), And Inventory Turnover (ITO) on Return on Assets (ROA) at PT. Unilever Indonesia Tbk.

The results of the One-Sample Kolmogorov-Smirnov analysis show that the Asymp.Sig value. (2-tailed) value is 0.134. Where the value is greater than $\alpha = 0.05$ ($0.134 > 0.05$), this indicates that the data in this study is normally distributed.

4.3 Multicollinearity Test

Multicollinearity test can be done by looking at the Tolerance and VIF (Variance Inflation Factors) values, provided that if the Tolerance value > 0.10 and $VIF < 10$ then there is no multicollinearity. Based on data processing, the multicollinearity test results are as follows:

Coefficients ^a								
Model	Unstandardized Coefficients			Standardized Coefficients Beta	t	Sig.	Collinearity Statistics	
	B	Std. Error					Tolerance	VIF
1	(Constant)	68.434	43.270		1.582	.165		
	DER	-.051	.024	-.869	-2.139	.076	.121	8.293
	CR	.135	.388	.137	.349	.739	.129	7.761
	ITO	-3.198	3.139	-.162	-1.019	.348	.791	1.264

a. Dependent Variable: ROA

Source: data processed by researchers

Figure 3. Table Coefficients

The multicollinearity test results in this study are as follows:

- The Debt to Equity Ratio (DER) Tolerance value is $0.121 > 0.10$ and the Debt to Equity Ratio (DER) VIF value is $8.293 < 10$.
- Current Ratio (CR) Tolerance value of $0.129 > 0.10$ and VIF Current Ratio (CR) value of $7.761 < 10$.
- Inventory Turnover (ITO) Tolerance value of $0.791 > 0.10$ and VIF Tolerance Inventory Turnover (ITO) value of $1.264 < 10$.

Based on the results in the coefficients table, it can be seen that the regression model does not have multicollinearity symptoms, because the Tolerance value > 0.10 and the VIF value < 10 .

4.4 Heteroscedasticity Test

The basis for decision making in the Glesjer Test is if the significance value in the coefficients table > 0.05 then there are no symptoms of heteroscedasticity, otherwise if the significance value in the coefficients table < 0.05 then there are symptoms of heteroscedasticity. Based on data processing, the results of the heteroscedasticity test are as follows:

Coefficients ^a								
Model	Unstandardized Coefficients			Standardized Coefficients Beta	t	Sig.	Collinearity Statistics	
	B	Std. Error					Tolerance	VIF
1	(Constant)	16.396	14.230		1.152	.293		
	DER	-.008	.008	-1.023	-1.039	.339	.121	8.293
	CR	-.181	.128	-1.355	-1.423	.205	.129	7.761
	ITO	-.026	1.032	-.010	-.025	.981	.791	1.264

a. Dependent Variable: Abd_RES

Source: data processed by researchers

Figure 4. Table Coefficients Abd_RES

The results of the heteroscedasticity test in this study are as follows:

- Debt to Equity Ratio (DER) has a significance value of $0.339 > 0.05$.

- b. Current Ratio (CR) has a significance value of $0.205 > 0.05$.
- c. Inventory Turnover (ITO) has a significance value of $0.981 > 0.05$.

Based on the results in the coefficients table, it can be seen that the regression model in this study does not occur symptoms of heteroscedasticity, because the significance value > 0.05 .

4.5 Autocorrelation Test

To detect the presence of autocorrelation, you can use the Run Test provided that the Asym. Sig (2-tailed) > 0.05 then there are no symptoms of autocorrelation, while if the Asym. Sig (2-tailed) < 0.05 then there are symptoms of autocorrelation. Based on data processing, the test results are as follows:

Runs Test	
	Unstandardized Residual
Test Value ^a	.91581
Cases < Test Value	5
Cases ≥ Test Value	5
Total Cases	10
Number of Runs	4
Z	-1.006
Asymp. Sig. (2-tailed)	.314

a. Median

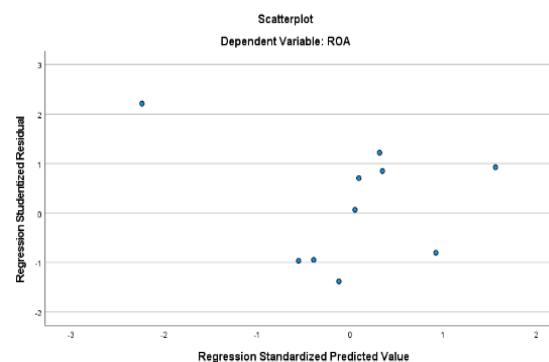
Source: data processed by researchers

Figure 5. Runs Test

Based on the Run Test results, shows that the Asym. Sig (2-tailed) value is 0.314. Because the value of Asym. Sig (2-tailed) > 0.05 , it can be concluded that there are no autocorrelation symptoms in the regression model.

4.6 Linearity Test

The statistical model that can be used to test is by using Scatterplot. Based on data processing, the test results are obtained as follows



Source: data processed by researchers

Figure 6. Scatterplot

Based on the results of the Linearity Test, it shows that the Scatterplot, it can be seen that linearity is fulfilled because the plot between the standardized residual value and the standardized predicted value does not form a certain or random plot with points spreading above and below the number 0 on the Y axis.

4.7 Multiple Linear Regression Analysis

Based on the results of data processing using SPSS version 27 as in Figura 3. Table Coefficients, the regression equation is obtained as follows:

$$Y = 68,434 - 0,051X_1 + 0,135X_2 - 3,139X_3$$

Interpretation:

1. The value of a = 68.434 means that if the Debt to Equity Ratio (X_1), current ratio (X_2), inventory turnover (X_3) = 0, then the Return on Assets (Y) at PT Unilever Indonesia Tbk is 68.434%.
2. The regression coefficient (b1) for the Debt to Equity Ratio (X_1) of -0.051 with a negative relationship direction indicates that every 1% increase in the Debt to Equity Ratio, the Return on Assets (Y) will decrease by 0.051% assuming the current ratio (X_2) and Inventory Turnover (X_3) remain. Conversely, every 1% decrease in Debt to Equity Ratio, the Return on Assets (Y) will increase by 0.051% assuming the Current Ratio (X_2) and Inventory Turnover (X_3) remain constant.
3. The regression coefficient (b2) for current ratio (X_2) of 0.135 with a positive relationship direction indicates that every 1% increase in Current Ratio, Return on Assets (Y) will increase by 0.135% assuming Debt to Equity Ratio (X_1) and Inventory Turnover (X_3) remain. Conversely, every 1% decrease in the current ratio, the return on Assets (Y) will decrease by 0.135% assuming the Debt to Equity Ratio (X_1) and Inventory Turnover (X_3) remain.
4. The regression coefficient (b3) for Inventory Turnover (X_3) of -3.139 with a negative relationship direction indicates that every 1% increase in inventory turnover, the Return on Assets will decrease by 3.139% assuming the Debt to Equity Ratio (X_1) and Current Ratio (X_2) are constant. Conversely, every 1% decrease in inventory turnover, the return on Assets will increase by 3.139% assuming Debt to Equity Ratio (X_1) and Current Ratio (X_2) remain constant.

4.8 Coefficient of Determination

Based on the results of data processing using SPSS version 27, the following results were obtained:

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.938 ^a	.881	.821	3.27962	1.205

a. Predictors: (Constant), ITO, CR, DER
b. Dependent Variable: ROA

Source: data processed by researchers

Figure 7. Model Summary

From the results of data processing, the R-Square (R^2) value is 0.881 or 88.1%. This shows that the percentage of the influence of Debt to Equity Ratio (DER), Current Assets (CR), and Inventory Turnover (ITO) on Return on Assets (ROA) is 88.1%, while the remaining 11.9% is influenced by other variables not examined by the author.

4.9 Hypothesis Testing

Mode Suitability Test (F Test)

This test is based on the significance value of F contained in the ANOVA table, provided that if the significance value of $F < 0.05$ then the regression model is declared feasible as a research model (H_0 is rejected and H_a is accepted). Based on data processing, the ANOVA table is obtained as follows:

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	475.737	3	158.579	14.743	.004 ^b
	Residual	64.536	6	10.756		
	Total	540.273	9			

a. Dependent Variable: ROA
b. Predictors: (Constant), ITO, CR, DER

Source: data processed by researchers

Figure 8. Table ANOVA

4.10 The effect of Debt to Equity Ratio (DER), Current Ratio (CR), and Inventory Turnover (ITO) on Return on Assets (ROA) at PT Unilever Indonesia Tbk.

Based on the results in the ANOVA table, it shows that the significance value of F is $0.004 < \alpha = 0.05$. From these results it can be concluded that the regression model is feasible to use and the decision taken is to reject H_0 and accept H_a . This means that simultaneously Debt to Equity Ratio (DER), Current Assets (CR), and Inventory Turnover (ITO) have a significant effect on Return on Assets (ROA) at PT Unilever Indonesia Tbk.

4.11 Regression Coefficient Significance Test (t Test)

This test is based on the significance value of t contained in the Coefficients table, provided that if the significance value of $t < 0.05$ then partially the independent variable has a significant effect on the dependent variable (H_0 is rejected and H_a is accepted). Based on data processing as in Figura 3. Table Coefficients, the following results are obtained.

4.12 The effect of Debt to Equity Ratio (DER) on Return on Asset (ROA) at PT Unilever Indonesia Tbk.

Based on the results in the Coefficients table, it shows that the Debt to Equity Ratio (DER) variable has a significance level of $t = 0.076 > \alpha = 0.05$. These results mean that H_{03} is accepted and H_{a3} is rejected. So it can be concluded that partially Debt to Equity Ratio (DER) has no significant effect on Return on Assets (ROA) at PT Unilever Indonesia Tbk.

4.13 The effect of Current Ratio (CR) on Return on Assets (ROA) at PT. Unilever Indonesia Tbk.

Based on the results in the Coefficients table, it shows that the Current Assets (CR) variable has a significance level of $t = 0.739 > \alpha = 0.05$. These results mean that H_{02} is accepted and H_{a2} is rejected. So it can be concluded that partially Current Assets (CR) has no significant effect on Return on Assets (ROA) at PT Unilever Indonesia Tbk.

4.14 The Effect of Inventory Turnover (ITO) on Return on Assets (ROA) at PT. Unilever Indonesia Tbk.

Based on the results in the Coefficients table, it shows that the Inventory Turnover (ITO) variable has a significance level of $t = 0.348 > \alpha = 0.05$. These results mean that H_0 is accepted and H_a is rejected. Thus, it can be concluded that partially, Inventory Turnover (ITO) does not have a significant effect on Return on Assets (ROA) at PT. Unilever Indonesia Tbk.

5. Conclusion

Based on the results of the research and discussion presented, the results of this study can be concluded as follows:

1. The development of the Debt to Equity Ratio (DER) for the 2015-2024 period experienced fluctuations that tended to increase. The lowest DER occurred in 2018. Meanwhile, the highest DER occurred in 2024.
2. The development of the Current Ratio (CR) for the period 2015-2024 was quite volatile. The highest CR occurred in 2020, while the lowest CR occurred in 2024.
3. The development of Inventory Turnover (ITO) for the 2015-2024 period was quite volatile. The lowest ITO occurred in 2024. Meanwhile, the highest ITO occurred in 2019.
4. The development of the Return on Assets (ROA) at PT. Unilever Indonesia Tbk. for the 2015-2024 period experienced fluctuations that tended to decline. The highest figure occurred in 2018. Meanwhile, the lowest figure occurred in 2024.
5. Based on the results of the study, the Debt to Equity Ratio (DER), Current Assets (CR), and Inventory Turnover (ITO) have a significant simultaneous effect on Return on Assets (ROA) at PT. Unilever Indonesia Tbk. Meanwhile, partially, Debt to Equity Ratio (DER), Current Assets (CR), and Inventory Turnover (ITO) do not significantly affect Return on Assets (ROA) at PT. Unilever Indonesia Tbk.

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