

The Effect of Current Ratio (CR), Debt to Equity Ratio (DER), and Total Asset Turnover (TATO) on Return on Asset (ROA) in Food Crop Subsector Companies Listed on the Indonesia Stock Exchange for the 2018-2025 Period

Natasya Noor Safira*, Salza Adzri Arismutia, Devyanthi Syarif

Universitas Indonesia Membangun, Bandung

Corresponding Author: natasya@student.ac.id,*
salza.adzri@inaba.ac.id, devyanthi.syarif@inaba.ac.id

Article Information:

Received: August 01, 2026; Accepted: August 09, 2026; Published: August 11, 2026

Abstract

This study aims to examine and analyze the effect of Current Ratio (CR), Debt to Equity Ratio (DER), and Total Asset Turnover (TATO) on Return on Asset (ROA), either partially or simultaneously, in food crop subsector companies listed on the Indonesia Stock Exchange (IDX) during the 2018-2025 period. This research employs a quantitative, descriptive-verificative approach, using secondary data from annual financial reports published on the official IDX website. The sampling technique used is purposive sampling, yielding a research sample of 10 companies and a total of 80 observations (10 companies x 8 years). Data are analyzed through multiple linear regression preceded by classical assumption tests, with hypothesis testing performed using the t-test for partial effects and the F-test for simultaneous effects. The results show that the Current Ratio has a positive and significant effect on Return on Asset, while the Debt to Equity Ratio and Total Asset Turnover have no statistically significant effect. Simultaneously, the three variables significantly affect Return on Asset, contributing 17.9 percent.

Keywords: Current Ratio, Debt To Equity Ratio, Total Asset Turnover, Return on Asset, *Food Crop Company*

JEL Classification: G32, G30, Q13

1. Introduction

The agricultural sector is one of the most important sectors in national development, particularly in its role as a supplier of raw materials, a provider of animal feed, a contributor to Gross Regional Domestic Product (GRDP), an absorber of labor, and a primary source of household income. One agricultural subsector that plays a highly strategic role is the food crop subsector, which includes rice and secondary crops (palawija) such as corn, soybeans, peanuts, mung beans, cassava, and sweet potatoes. The main characteristics of this subsector include its role as a producer of staple foods, a relatively short (seasonal) harvest cycle, the largest labor absorption in rural areas, and the perishable nature of its products (*perishable*), which requires

rapid post-harvest handling.

Climate change has become a global issue with a major impact on various sectors of life, including food security. As an agrarian country, Indonesia is highly dependent on the agriculture, fisheries, and livestock sectors. Changes in temperature, erratic rainfall patterns, and the increasing frequency of natural disasters threaten food availability nationwide. According to an FAO report, climate change could reduce food production by up to 30 percent in tropical countries, including Indonesia, posing serious challenges to future food security through declining crop productivity, pest and disease threats, and the risk of drought and flooding.

Pressure on this subsector is also reflected in issuer performance. Kontan.co.id reported that PT Bisi International Tbk (BISI) experienced pressure due to declining performance in its corn seed business, which is the company's main source of revenue, with management projecting a roughly 3 percent (*year-on-year* decline in current-year revenue due to weakening demand for corn seed, while corn seed sales were predicted to fall 20-30 percent compared to the previous year, thereby reducing the company's ability to generate profit from its assets. On the other hand, the company continued to invest through capital expenditure (*capital expenditure/capex*) of Rp53 billion to expand its distribution fleet and marketing network, but this increase in assets was not accompanied by a comparable increase in profit, as the core business continued to decline ([Kontan.co.id](https://kontan.co.id), 2026)

According to Kasmir (2022), Return on Asset is used to indicate a company's ability to generate profit using its total assets, where the smaller this Ratio, the less favorable it is, and vice versa. Based on this definition, ROA is a highly important Ratio for a company because it reflects the efficiency and effectiveness of using all assets in operational activities to sustain the company's continuity. Several factors are suspected to affect this profitability Ratio, including Current Ratio (CR), Debt to Equity Ratio (DER), and Total Asset Turnover (TATO).

According to [Kasmir \(2022\)](#), Current Ratio is a Ratio used to measure a company's ability to pay short-term liabilities or debts that are about to fall due, or can be interpreted as the extent to which current assets are available to cover short-term liabilities. According to [Kasmir \(2022\)](#), the Debt to Equity Ratio is a Ratio used to assess debt relative to equity, calculated by comparing total liabilities with equity, so that the company's position with respect to its obligations to other parties, as well as the balance between fixed asset value and available capital, can be determined. Meanwhile, according to [Kasmir \(2022\)](#), Total Asset Turnover is used to calculate the level of asset ownership and income, that is, to measure the extent of a company's effectiveness in managing its assets to generate sales, where the higher this Ratio, the better, and a lower Ratio indicates that the sales method has not been optimized.

This study uses financial Ratios of food crop subsector companies listed on the Indonesia Stock Exchange for the 2024-2025 period, as presented in Table 1 below.

Table 1. Phenomenon Data on Current Ratio, Debt to Equity Ratio, Total Asset Turnover, and Return on Asset in Food Crop Subsector Companies, 2024-2025

No	Company Name	Code	Year	CR (x)	DER (x)	TATO (x)	ROA
1	PT Andira Agro Tbk	ANDI	2024	2,6	0,36	1,3	10,19
		ANDI	2025	3,15	0,34	1,24	9,58
2	PT Sinar Mas Agro Resources and Technology Tbk	SMAR	2024	1,83	0,97	1,85	3,01
		SMAR	2025	1,66	0,73	1,92	2,07

3	PT Astra Agro Lestari Tbk	AALI	2024	2,6	0,18	0,76	5,27
		AALI	2025	4,33	0,14	1,03	3,98

Source: www.idx.co.id, data processed, 2026

Table 1 shows a varied pattern across the three sample companies. At PT Andira Agro Tbk (ANDI), Current Ratio increased from 2.60 times in 2024 to 3.15 times in 2025, yet Return on Asset actually decreased from 10.19 to 9.58 over the same period. This condition is inconsistent with Kasmir's theory, which states that the higher a company's ability to meet its short-term obligations, the better the positive signal for company profitability. Several studies have found that Current Ratio affects Return on Asset (Fatimah et al., 2025; [Harahap et al., 2025](#); [Sriyana & Sosrowidigdo, 2025](#)), whereas the studies of [Putri & Sosrowidigdo \(2025\)](#); [Nianwar et al. \(2023\)](#) found that Current Ratio does not affect Return on Asset.

At PT Sinar Mas Agro Resources and Technology Tbk (SMAR), Debt to Equity Ratio decreased from 0.97 times in 2024 to 0.73 times in 2025, yet Return on Asset also decreased from 3.01 to 2.07 over the same period. This condition is inconsistent with Hery's (2023) theory, which states that the higher the DER, the greater the risk a company may face because debt financing exceeds its own capital, so a decrease in DER should ideally be followed by improved profitability. The studies Nisa & Arismutia (2026); [Rahmawati & Oktrima \(2026\)](#) found that Debt to Equity Ratio affects Return on Asset, whereas the studies of [Mutawali et al. \(2024\)](#); [Manurung et al. \(2025\)](#) found that Debt to Equity Ratio does not affect Return on Asset.

Meanwhile, at PT Astra Agro Lestari Tbk (AALI), Total Asset Turnover increased from 0.76 times in 2024 to 1.03 times in 2025, yet Return on Asset actually decreased from 5.27 to 3.98 over the same period. This condition is inconsistent with the theory of [Kasmir \(2022\)](#), which states that the higher the Total Asset Turnover, the more effectively a company manages its assets to generate sales, which should, in turn, increase profitability. The study of [Fatimah et al. \(2025\)](#) found that Total Asset Turnover affects Return on Asset, whereas the studies of [Nabilah & Lubis \(2025\)](#) found that Total Asset Turnover does not affect Return on Asset.

These three phenomena in the sample data above reveal a gap between theory and actual field conditions among food crop subsector companies on the Indonesia Stock Exchange, where improvements in each financial Ratio (CR, DER, TATO) are not always followed by improvements in Return on Asset. This condition is reinforced by prior research findings that also show inconsistency (a research gap) regarding the effect of these three Ratios on Return on Asset. Based on the phenomena and issues described above, this study aims to analyze and empirically demonstrate the effect of Current Ratio, Debt to Equity Ratio, and Total Asset Turnover on Return on Asset, both partially and simultaneously, in food crop subsector companies listed on the Indonesia Stock Exchange during the 2018-2025 period.

2. Literature Review

2.1 Return on Asset (ROA)

According to [Kasmir \(2022\)](#) Click or tap here to enter text., Return on Asset is used to indicate a company's ability to generate profit using its total assets. Hery (2023) adds that Return on Asset is used to measure the amount of net profit generated from each rupiah of funds invested in total assets. [Sirait \(2017\)](#) refers to it as the profit strength Ratio (*earning power Ratio*), which describes a company's ability to generate profit from its available resources (assets). Based on these views, Return on Asset can be concluded to be a profitability Ratio used to measure a company's effectiveness in generating profit by utilizing its assets, where a higher ROA value indicates better company performance due to a greater rate of return on investment [Kasmir](#)

(2022). This is supported by the study of [Nasriyah et al. \(2026\)](#), who found that ROA has a positive and significant effect on the stock prices of food and beverage subsector companies, as investors tend to appreciate companies that can optimally generate profit from their assets. [Arrosidin & Arismutia \(2026\)](#), however, found that Return on Asset did not have a significant partial effect on stock prices in insurance-subsector financial companies, indicating that market response to profitability performance may vary across industry sectors.

2.2 Current Ratio (CR)

According to [Kasmir \(2022\)](#), the current ratio is a Ratio used to measure a company's ability to pay short-term liabilities or debts that are due when billed in full. [Fahmi \(2020\)](#) adds that the current ratio is a commonly used measure of short-term solvency, namely a company's ability to meet its debt obligations when they fall due. Based on these views, the current ratio can be concluded to be a Ratio used to measure a company's ability to settle all short-term liabilities that are about to fall due using its current assets. The higher a company's Current Ratio, the greater its ability to meet its short-term financial obligations ([Kasmir, 2022](#)). This is supported by the study of Ramadhan & Nugroho (2025), who found that the Current Ratio affects Return on Assets. However, this finding contrasts with the study of [Hamzah et al. \(2024\)](#), who found that the Current Ratio does not affect Return on Assets.

2.3 Debt to Equity Ratio (DER)

According to [Kasmir \(2022\)](#), Debt to Equity Ratio is a Ratio used to assess debt relative to equity, obtained by comparing total debt, including current liabilities, with total equity. [Hamzah et al. \(2024\)](#) adds that Debt to Equity Ratio measures the percentage of liabilities in a company's capital structure and is important for measuring business risk, which increases as the amount of liabilities increases. Based on these views, Debt to Equity Ratio can be concluded to be a leverage Ratio used to determine the extent to which a company is financed by debt compared to its own capital, in order to determine the business risk borne by the company. However, the study by [Arrosidin & Arismutia \(2026\)](#) on insurance-sector companies shows that DER has no significant effect on stock prices, as the high liabilities in the insurance sector reflect business mechanisms related to claim reserves rather than unhealthy financial conditions. In addition, the study of [Irmala et al. \(2025\)](#) found that Debt to Equity Ratio has a significant effect on Return on Asset, whereas the study of [Margareta & Wartono \(2025\)](#) found that Debt to Equity Ratio does not affect Return on Asset.

2.4 Total Asset Turnover (TATO)

According to [Harahap \(2020\)](#), Total Asset Turnover shows the turnover of total assets, measured by sales volume, or the extent to which total assets generate sales. The higher this Ratio, the better. [Hery \(2023\)](#) adds that Total Asset Turnover is a Ratio used to measure the effectiveness of a company's total assets in generating sales from each rupiah of funds invested in total assets. Based on these views, Total Asset Turnover can be concluded to be an activity Ratio that measures a company's efficiency in using all of its assets to generate sales, which helps management evaluate whether asset investments have been managed optimally [Kasmir \(2022\)](#). In this regard, [Nisa & Arismutia \(2026\)](#) found that Total Asset Turnover has no significant effect on *Return On Equity* in telecommunications-subsector companies, indicating that an increase in asset use efficiency does not always correspond directly with an increase in a company's net profit. Furthermore, the study of [Kurniasih & Merliana \(2024\)](#) found that Total Asset Turnover has a significant effect on Return on Asset, whereas the study of [Novitta & Juwanda \(2023\)](#) found that Total Asset Turnover does not affect Return on Asset.

2.5 Conceptual Framework and Hypotheses

[Sugiyono \(2020:52\)](#) explains that a conceptual framework is a model that describes how a theory relates to important factors already identified within a particular problem, in the form of a narrative or proposition regarding the concept for solving the identified problem.

The relationship between Current Ratio and Return on Asset is based on the premise that the higher the Current Ratio, the greater a company's ability to pay its debts, because the company's current assets exceed its current liabilities, thereby reducing pressure on cash flow and allowing the ability to generate profit from assets to be more optimal ([Sujarweni, 2015](#)). The study of [Mentari & Kosadi \(2024\)](#) found that Current Ratio affects Return on Asset, whereas the studies of [Putri & Sosrowidigdo \(2025\)](#) found that Current Ratio does not affect Return on Asset.

The relationship between the Debt to Equity Ratio and Return on Assets is based on solvency theory, which states that the Ratio is used to assess a company's ability to pay all of its obligations, both short-term and long-term, in the event of liquidation. The study of [Rahmawati & Oktrima \(2026\)](#) found that Debt to Equity Ratio affects Return on Asset, whereas the study of [Mutawali et al. \(2024\)](#) found that Debt to Equity Ratio does not affect Return on Asset.

The relationship between Total Asset Turnover and Return on Asset is based on the premise that the more effectively a company's total assets are used to generate sales, the greater the sales generated from each rupiah of funds invested in total assets, which in turn increases company profitability ([Hery, 2023](#)). The study of [Fatimah et al. \(2025\)](#) found that Total Asset Turnover affects Return on Asset, whereas the study of [Sari et al. \(2026\)](#) found that Total Asset Turnover does not affect Return on Asset.

Based on this conceptual framework, the hypotheses proposed in this study are as follows:

H1: There is an effect of Current Ratio on Return on Asset.

H2: There is an effect of Debt to Equity Ratio on Return on Asset.

H3: There is an effect of Total Asset Turnover on Return on Asset.

H4: There is an effect of Current Ratio, Debt to Equity Ratio, and Total Asset Turnover simultaneously on Return on Asset.

3. Research Method

This study uses a quantitative approach with descriptive and verificative methods. The descriptive method is used to determine the value of each research variable, while the verificative method is used to test hypotheses regarding the effect of the independent variables on the dependent variable ([Sugiyono, 2021](#)). The data used are sourced from the annual financial reports of each company published on the official website of the Indonesia Stock Exchange (www.idx.co.id).

3.1 Operational Definition of Variables

The dependent variable in this study is Return on Asset (Y), while the independent variables consist of Current Ratio (X1), Debt to Equity Ratio (X2), and Total Asset Turnover (X3). The operational definitions and indicators of each variable are presented in Table 2 below.

Table 2. Operationalization Definition of Variables

Variable	Definition	Indicator	Scale
Current Ratio (X1)	Ratio measuring the ability of	CR = Current Assets /	Ratio

	current assets to cover a company's current liabilities	Current Liabilities	
Debt to Equity Ratio (X2)	Ratio measuring the proportion of total debt to a company's total equity	DER = Total Debt / Total Equity	Ratio
Total Asset Turnover (X3)	Ratio measuring the effectiveness of total asset use in generating sales	TATO = Sales / Total Assets	Ratio
Return on Asset (Y)	Ratio measuring a company's ability to generate profit from its total assets	ROA = Profit After Tax / Total Assets	Ratio

Source: Kasmir (2022), Harahap (2020), data processed

3.2 Population and Sample

The population in this study consists of all food crop subsector companies listed on the Indonesia Stock Exchange during the 2018-2025 period, totaling 24 companies. The sampling technique used is *nonprobability purposive sampling*, namely a sample determination technique based on specific considerations and criteria set by the researcher (Sugiyono, 2021). The criteria used in this study are: (1) food crop subsector companies consistently listed on the Indonesia Stock Exchange during the 2018-2025 research period; (2) companies that did not newly conduct an initial public offering (*listing*) in the middle of the research period; and (3) companies that published complete and consecutive annual financial reports during the research period. Details of the sample selection process are presented in Table 3.

Table 3. Sample Selection Criteria

No.	Criteria	Number of Companies
1	Food crop subsector companies consistently listed on the Indonesia Stock Exchange during the 2018-2025 research period.	24
2	Food crop subsector companies that newly conducted an IPO in the middle of the 2018-2025 research period.	(9)
3	Companies that did not publish complete and consecutive annual financial reports during the 2018-2025 research period.	(5)
Number of Companies Meeting All Sample Criteria		10

Source: www.idx.co.id (Data Processed, 2026)

Based on these criteria, ten sample companies were obtained as presented in Table 4, resulting in a total of 80 data observations analyzed (10 companies x 8 years).

Table 4. Research Objects

No.	Company Name	Stock Code
1	Astra Agro Lestari Tbk.	AALI
2	Andira Agro Tbk.	ANDI
3	Sinar Mas Agro Resources and Technology Tbk.	SMAR
4	Austindo Nusantara Jaya Tbk.	ANJT
5	Wahana Pronatural Tbk.	WAPO
6	BISI Internasional Tbk.	BISI
7	Mahkota Group Tbk.	MGRO
8	Sampoerna Agro Tbk.	SGRO
9	Palma Serasih Tbk.	PSGO
10	Salim Ivomas Pratama Tbk.	SIMP

3.3 Data Analysis Technique

The data analysis technique uses multiple linear regression, with a significance level (alpha) of 5 percent. Before regression testing is carried out, classical assumption tests are performed to ensure the regression model meets the BLUE (Best Linear Unbiased Estimator) requirements, including normality, multicollinearity, and heteroscedasticity tests ([Ghozali, 2012](#)).

The normality test examines whether the disturbance (or residual) variables in the regression model are normally distributed. In this study, the Kolmogorov-Smirnov (K-S) test is used, with the decision criterion that if the p-value is greater than 0.05, the data are normally distributed, and vice versa ([Ghozali, 2021](#)). The multicollinearity test aims to examine whether the regression model exhibits a high correlation among the independent variables, which is detected through the *Tolerance* and Variance Inflation Factor (VIF) values, with the criterion that no multicollinearity occurs if the *Tolerance* value is greater than 0.10 or the VIF value is less than 10 ([Ghozali, 2021](#)). The heteroscedasticity test aims to examine whether the regression model exhibits unequal variance of residuals from one observation to another, which is observed through a scatterplot of predicted dependent variable values (ZPRED) against residuals (SRESID), with the criterion that no heteroscedasticity occurs if the points are randomly scattered above and below zero on the Y axis without forming a particular pattern ([Ghozali, 2021](#)).

Hypothesis testing is carried out through the t-test to examine partial effects and the F-test to examine simultaneous effects, as well as the coefficient of determination (R^2) test to determine the magnitude of the independent variables' contribution to the dependent variable.

4. Results and Discussion

4.1 Descriptive Statistics

Descriptive statistics are used to provide a general overview of the distribution of the research data during the observation period. The results of the descriptive statistical test on 80 observations (10 companies x 8 years) are presented in Table 5 below.

Table 5. Descriptive Statistics

	N	Minimum	Maximum	Mean	SD
CR	80	0,42	14,31	3,4119	3,40243
DER	80	0,07	4,94	1,0228	1,09119
TATO	80	0,32	1,19	0,6857	0,25226
ROA	80	-2,00	16,60	6,2728	4,83815

Source: data processing results, 2026

Table 5 shows that the Current Ratio variable has a mean of 3.4119 and a standard deviation of 3.40243. The Debt-to-Equity Ratio variable has a mean of 1.0228 and a standard deviation of 1.09119. The Total Asset Turnover variable has a mean of 0.6857 and a standard deviation of 0.25226. The Return on Asset variable has a mean of 6.2728, a standard deviation of 4.83815, and a range of -2.00 to 16.60.

4.2 Classical Assumption Test Results

The Return on Asset (ROA) variable in this study was transformed to the natural logarithm (LN_ROA) before regression, to improve the normality of the residuals and reduce the influence of extreme values among the sample companies.

4.2.1 Normality Test Results

Based on the *Normal P-P Plot of Regression Standardized Residual* (Figure 1), the data points generally follow the direction of the diagonal line, although in the observed cumulative probability range of approximately 0.5 to 0.7, a step pattern deviating from the diagonal line is visible.

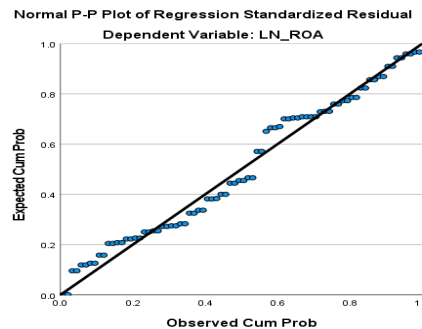


Figure 1. Normal P-P Plot of Regression Standardized Residual

4.2.2 Heteroscedasticity Test Results

Based on the scatterplot between *Regression Standardized Predicted Value* and *Regression Studentized Residual* (Figure 2), most of the data points are randomly scattered around zero on the Y axis, although there are two data points that deviate considerably (outliers) in the upper-left quadrant of the graph. It can therefore be concluded that the data does not exhibit heteroscedasticity.

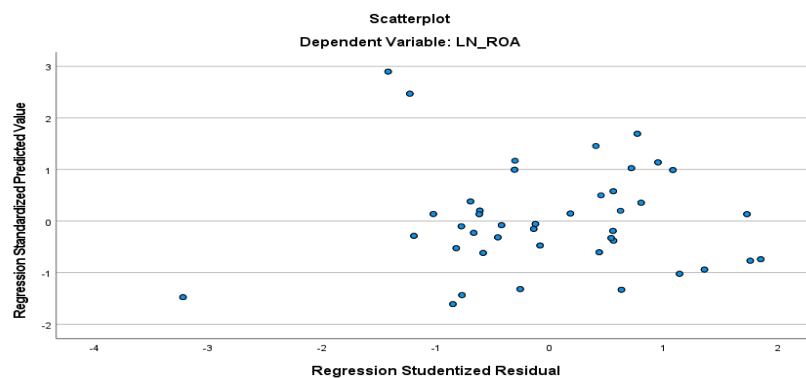


Figure 2. Scatterplot Heteroscedasticity Test

4.2.3 Multicollinearity Test Results

Based on Table 6, the *Tolerance* value for the three independent variables ranges from 0.689 to 0.883, while the Variance Inflation Factor (VIF) value ranges from 1.132 to 1.451. It can be concluded that the data does not exhibit multicollinearity.

Table 6. Multicollinearity Test Results

Model	Tolerance	VIF
CR	0,689	1,451
DER	0,723	1,382
TATO	0,883	1,132

a. Dependent Variable: LN_ROA. Source: data processing results, 2026

4.3 Multiple Linear Regression Analysis Results

The results of the multiple linear regression test between Current Ratio (X1), Debt to Equity Ratio (X2), and Total Asset Turnover (X3) on the natural logarithm of Return on Asset (LN_ROA) are presented in Table 7 below.

Table 7. Multiple Linear Regression Test Results

Model	B	Std. Error	Beta	t	Sig.
(Constant)	1,445	0,232	-	6,216	<0,001
CR	0,079	0,022	0,454	3,627	<0,001
DER	0,015	0,066	0,027	0,223	0,824
TATO	0,508	0,259	0,217	1,962	0,053

a. Dependent Variable: LN_ROA. Source: data processing results, 2026

Based on Table 7, the multiple linear regression equation formed in this study is as follows:

$$\text{LN_ROA} = 1,445 + 0,079 \text{ CR} + 0,015 \text{ DER} + 0,508 \text{ TATO}$$

The constant value of 1.445 indicates that if Current Ratio, Debt to Equity Ratio, and Total Asset Turnover are held constant or equal to zero, the natural logarithm of Return on Assets is estimated at 1.445. The CR regression coefficient of 0.079 indicates a positive relationship between Current Ratio and Return on Assets. The DER regression coefficient of 0.015 indicates a positive relationship between the Debt-to-Equity Ratio and Return on Asset, while the TATO regression coefficient of 0.508 indicates a positive relationship between Total Asset Turnover and Return on Asset.

4.4 Partial Hypothesis Testing Results (t-test)

Partial hypothesis testing is conducted by comparing the calculated t value with the t table value at a 5 percent significance level and degrees of freedom (df) of 76, which equals 1.992.

The Current Ratio variable (X1) obtained a calculated t value of 3.627 with a significance value of <0.001. Because the significance value is smaller than 0.05 and the calculated t value is greater than the t table value ($3.627 > 1.992$), H1 is accepted, meaning that Current Ratio has a positive and significant effect on Return on Asset.

The Debt-to-Equity Ratio variable (X2) yielded a calculated t-value of 0.223 and a p-value of 0.824. Because the significance value is greater than 0.05, H2 is rejected, meaning that the Debt to Equity Ratio has no statistically significant effect on Return on Assets.

The Total Asset Turnover variable (X3) yielded a calculated t-value of 1.962 and a significance value of 0.053. Because the significance value is greater than 0.05 and the calculated t value is smaller than the t table value ($1.962 < 1.992$), H3 is rejected, meaning that Total Asset Turnover has no statistically significant effect on Return on Asset at the 95 percent confidence level, although its significance value is close to the 0.05 threshold.

4.5 Simultaneous Hypothesis Testing Results (F-test)

Table 8. F-test Results (ANOVA)

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	4,948	3	1,649	5,539	0,002
Residual	22,631	76	0,298		
Total	27,578	79			

a. Dependent Variable: LN_ROA. b. Predictors: (Constant), TATO, DER, CR. Source: data processing results, 2026

Based on Table 8, the F-test results show a calculated F value of 5.539 with a significance value of 0.002. The F table value at a significance level of 5 percent with numerator degrees of freedom (df1) of 3 and denominator degrees of freedom (df2) of 76 is 2.725. Because the calculated F value is greater than the F table value ($5.539 > 2.725$) and the significance value is smaller than 0.05, H4 is accepted, meaning that Current Ratio, Debt to Equity Ratio, and Total Asset Turnover simultaneously have a significant effect on Return on Asset.

4.6 Coefficient of Determination Results

Table 9. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error
1	0,424	0,179	0,147	0,54568

a. Predictors: (Constant), TATO, DER, CR. b. Dependent Variable: LN_ROA. Source: data processing results, 2026

Based on Table 9, an R value of 0.424, an R Square value of 0.179, and an Adjusted R Square value of 0.147 were obtained. This R Square value indicates that Current Ratio, Debt to Equity Ratio, and Total Asset Turnover jointly explain 17.9 percent of the variation in Return on Asset among the sample companies, while the remaining 82.1 percent is explained by other factors outside this research model.

4.7. Discussion

4.7.1 The Effect of Current Ratio on Return on Asset

The test results show that Current Ratio has a positive and significant effect on Return on Asset in food crop subsector companies listed on the Indonesia Stock Exchange during the 2018-2025 period. This finding is in line with [Kasmir's theory \(2019:134\)](#), which states that the higher a company's ability to meet its short-term obligations, the greater its ability to meet short-term financial obligations, thereby reducing pressure on cash flow and allowing the company to focus more on optimizing its assets to generate profit. This result is supported by the study conducted by [Ramadhan & Nugroho \(2025\)](#), who stated that Current Ratio affects Return on Asset. However, this result is inconsistent with the study conducted by [Hamzah et al. \(2024\)](#), who found that Current Ratio does not affect Return on Asset.

This significant effect of Current Ratio is interesting to examine given the phenomenon described in the introduction, where PT Andira Agro Tbk, which experienced an increase in Current Ratio from 2.60 to 3.15 times between 2024 and 2025, actually recorded a decrease in Return on Asset from 10.19 to 9.58 over the same period. The regression results for the sample population as a whole show that the direction of the relationship between CR and ROA is actually positive and significant, so the case of PT Andira Agro Tbk is more appropriately understood as a deviation at the individual company level due to company-specific factors (such as a decline in corn seed sales that directly pressured profit), rather than as evidence that Current Ratio generally does not play a role in supporting the profitability of food crop companies. Managerially, this finding suggests that food crop companies should continue maintaining adequate current assets to meet short-term obligations, as this has been statistically proven to positively contribute to a company's ability to generate profit from its assets.

4.7.2 The Effect of Debt to Equity Ratio on Return on Asset

The test results show that Debt to Equity Ratio has no statistically significant effect on Return on Asset in food crop subsector companies listed on the Indonesia Stock Exchange during the

2018-2025 period, although the direction of its coefficient (positive) is not entirely consistent with the theoretical assumption that increased debt will suppress profitability through higher interest expenses ([Hery, 2018:168](#)). This insignificant effect of Debt to Equity Ratio is likely due to the characteristics of food crop companies, which generally maintain a relatively conservative capital structure (average DER of 1.02 times), so that variation in debt levels among companies is not yet large enough to produce a statistically significant effect on profitability. This result is in line with the study conducted by [Margareta & Wartono \(2025\)](#), who concluded that Debt to Equity Ratio does not affect Return on Asset. However, this result contrasts with the study conducted by [Irmala et al. \(2025\)](#), who found that Debt to Equity Ratio has a significant effect on Return on Asset.

This insignificant effect of Debt to Equity Ratio is also reflected in the case of PT Sinar Mas Agro Resources and Technology Tbk, which actually recorded a decrease in Debt to Equity Ratio from 0.97 to 0.73 times between 2024 and 2025, yet its Return on Asset still decreased from 3.01 to 2.07 over the same period. This phenomenon is consistent with the regression results, which show that changes in debt structure are not automatically the main determinant of food crop companies' profitability, and that the decline in profitability of PT Sinar Mas Agro Resources and Technology Tbk is likely more influenced by other operational factors, such as production cost efficiency or commodity price fluctuations, rather than solely by its financing policy.

4.7.3 The Effect of Total Asset Turnover on Return on Asset

The test results show that Total Asset Turnover has no statistically significant effect on Return on Asset at the 95 percent confidence level, although its significance value (0.053) is very close to the 0.05 threshold and the direction of its coefficient (positive) is consistent with the theoretical assumption that higher asset turnover will increase sales and, in turn, increase profit ([Hery, 2020:187](#)). This closeness of the significance value indicates that the effect of Total Asset Turnover on Return on Asset is marginal, sitting right at the boundary between being statistically significant and not, so that increasing the number of observations or extending the research period could potentially change this test result to become significant. This result is consistent with the study by [Novitta & Juwanda \(2023\)](#), which concluded that Total Asset Turnover does not affect Return on Asset. However, this result contrasts with the study conducted by [Kurniasih & Merliana \(2024\)](#), who found that Total Asset Turnover has a significant effect on Return on Asset.

This result also helps explain the phenomenon shown by PT Astra Agro Lestari Tbk in the introduction, which recorded an increase in Total Asset Turnover from 0.76 to 1.03 times between 2024 and 2025, yet its Return on Asset actually decreased from 5.27 to 3.98 over the same period. The only marginally significant statistical effect of Total Asset Turnover on the sample population indicates that an increase in asset turnover does not always and does not automatically translate into increased profit, particularly when the increase in sales volume is not accompanied by an improvement in profit margin, for example, due to commodity price pressure or rising production costs that erode a company's profitability.

4.7.4 The Simultaneous Effect of Current Ratio, Debt to Equity Ratio, and Total Asset Turnover on Return on Asset

The F-test results show that Current Ratio, Debt to Equity Ratio, and Total Asset Turnover simultaneously have a significant effect on Return on Assets in food crop subsector companies listed on the Indonesia Stock Exchange during the 2018-2025 period. This result indicates that

these three financial Ratios together form a relevant combination of indicators for predicting company profitability in this subsector, even though only the current ratio was shown to have a significant partial effect. The significance of this simultaneous test result shows that capital structure (DER) and asset use efficiency (TATO), although not individually significant, still contribute to the model's overall predictive power when interacting with Current Ratio.

The R Square value of 0.179 indicates that the three independent variables explain only 17.9 percent of the variation in Return on Asset, while the remaining 82.1 percent is explained by factors outside this research model. The relatively small explanatory power of this model is consistent with the complexity of the profitability phenomenon in the food crop industry described in the introduction, where pressure on company profit does not only stem from capital structure, liquidity, and asset efficiency alone, but is also influenced by external factors such as climate change, agricultural commodity price fluctuations, and market demand volatility that cannot be fully captured by the three financial Ratios in this model. Thus, although this research model is statistically significant, this result should be interpreted as part of a broader picture of the determinants of food crop companies' profitability, rather than as the sole explanation for the phenomenon.

5. Conclusion

Based on the analysis and discussion presented above, it can be concluded that Current Ratio has a positive and significant effect on Return on Asset in food crop subsector companies listed on the Indonesia Stock Exchange during the 2018-2025 period. Debt to Equity Ratio has no statistically significant effect on Return on Asset. Total Asset Turnover also has no statistically significant effect on Return on Asset, although its significance value is very close to the 0.05 threshold. Simultaneously, Current Ratio, Debt to Equity Ratio, and Total Asset Turnover have a significant effect on Return on Asset, with an explanatory power of 17.9 percent, while the remainder is explained by other factors outside this research model.

Daftar Pustaka

- Arrosidin, L. H., & Arismutia, S. A. (2026). Pengaruh Return on Asset, Debt to Equity Ratio dan Earning per Share terhadap Harga Saham pada Perusahaan Keuangan Subsektor Asuransi yang Terdaftar di Bursa Efek Indonesia Tahun 2017-2024. *RIGGS: Journal of Artificial Intelligence and Digital Business*, 4(4), 14381–14387. <https://doi.org/10.31004/riggs.v4i4.5965>
- Fahmi, I. (2020). *Analisis Laporan Keuangan*. Alfabeta.
- Fatimah, S., Rimawan, M., & Muthiah, H. (2025). Pengaruh Current Ratio, Debt to Asset Ratio, dan Total Asset Turnover Terhadap Return On Assets pada Perusahaan Subsektor Rokok yang Terdaftar di Bursa Efek Indonesia. *Jurnal Ilmiah Manajemen, Bisnis Dan Kewirausahaan*, 5(3), 415–425. <https://doi.org/10.55606/jurimbik.v5i3.1370>
- Ghozali, I. (2012). *Aplikasi Analisis Multivariate dengan Program IBM SPSS 20*. Badan Penerbit - Universitas Diponegoro.
- Ghozali, I. (2021). *Aplikasi Analisis Multivariate Dengan Program IBM SPSS*. Badan Penerbit Universitas Diponegoro.

- Hamzah, Z. Z., Hamdani, M., Muhlis, & Larasati Larasati. (2024). Pengaruh Current Ratio (CR) Dan Net Profit Margin (NPM) Terhadap Return On Assets (ROA) Pada Pt Aneka Tambang. *Economicus: Jurnal Ekonomi Dan Manajemen*, 15(1), 89–98. <https://doi.org/10.47860/economicus.v15i1.36>
- Harahap, A. F., Maidalena, M., & Sugianto, S. (2025). Pengaruh Current Ratio (CR), Debt To Equity Ratio (DER) Dan Total Asset Turnover (TATO) Terhadap Return On Assets (ROA) Pada Pt Cisadane Sawit Raya Tbk Periode. *Jurnal Manajemen Terapan Dan Keuangan*, 14(04), 1674–1686. <https://doi.org/10.22437/jmk.v14i04.49523>
- Harahap, S. S. (2020). *Analisis Krisis Laporan Keuangan*. PT Rajagrafindo Persada.
- Hery. (2023). *Analisis Laporan Keuangan: Integrated and Comprehensive Edition*. PT Grasindo.
- Irmala, T. L., Nurulrahmatiah, N., & Juwani, J. (2025). Pengaruh Debt To Equity Ratio dan Current Ratio Terhadap Return On Asset Pada PT Sido Muncul, Tbk. *Jurnal Ekonomi, Bisnis Dan Manajemen*, 4(4), 56–70. <https://doi.org/10.58192/ebismen.v4i4.3730>
- Kasmir. (2022). *Analisis Laporan Keuangan* (Edisi Revisi). PT RajaGrafindo Persada.
- Kontan.co.id. (2026). *Biarpun penjualan turun, PT Bisi International Tbk (BISI) ingin laba bersih naik 15%*. <https://insight.kontan.co.id/news/biarpun-penjualan-turun-pt-bisi-international-tbk-bisi-ingin-laba-bersih-naik-15>
- Kurniasih, R., & Merliana, V. (2024). Pengaruh Total Asset Turnover, Debt To Equity Ratio, Current Ratio, dan Firm Size Terhadap Return On Asset pada Perusahaan Manufaktur Subsektor Makanan dan Minuman yang Terdaftar di BEI Tahun 2016-2023. *Economic Reviews Journal*, 3(2). <https://doi.org/10.56709/mrj.v3i2.471>
- Manurung, T. E., Dhafin, F., & Arrazi, R. M. (2025). Pengaruh Debt To Equity Ratio (DER) Terhadap Return On Assets (ROA) Perusahaan Charoen Pokphand Indonesia. *Jurnal Akuntansi AKTIVA*, 6(2), 158–167. <https://doi.org/10.24127/akuntansi.v6i2.10514>
- Margareta, B., & Wartono, T. (2025). Pengaruh Debt to Equity Ratio dan Total Asset Turnover Terhadap Return on Asset PT Aneka Tambang Tbk Periode 2015-2024. *Jurnal Operasional Manajemen [JURAMA]*, 2(3), 675–683. <https://doi.org/10.58174/jrm.Volume:2.No:3.2025.283.Hal:675-683>
- Mentari, M. L., & Kosadi, F. (2024). Pengaruh Total Asset Turnover, Current Ratio, Debt to Equity Ratio, dan Ukuran Perusahaan Terhadap Return on Asset Pada Perusahaan Sub Sektor Properti dan Real Estate. *Innovative: Journal Of Social Science Research*, 4(2).
- Mutawali, Lorienta, L., & Widiyanti, S. D. (2024). Pengaruh Current Rasio (CR), Debt To Equity Rasio (DER) Dan Debt To Asset Rasio (DAR) Terhadap

- Return On Assets (ROA) Pada Perusahaan Properti Dan Real Estate Yang Terdaftar Di Bursa Efek Indonesia Periode 2012-2021. *Jurnal Sekretari Universitas Pamulang*, 11(1), 37–48. <https://doi.org/10.32493/skr.v11i1.38205>
- Nabilah, Z., & Lubis, I. (2025). Pengaruh Total Asset Turn Over (TATO) Dan Pertumbuhan Penjualan Terhadap Return On Asset (ROA) Pada Pt Unilever Tbk Periode 2012-2024. *Jurnal Ilmiah Manajemen Dan Akuntansi*, 2(6), 125–134. <https://doi.org/10.69714/wk967c88>
- Nasriyah, A., Damayanti, S., & Arismutia, S. A. (2026). Pengaruh Return on Asset, Current Ratio, dan Debt to Equity Ratio terhadap Harga Saham. *ECo-Fin*, 8(2), 1250–1259. <https://doi.org/10.32877/ef.v8i2.3929>
- Nianwar, A., Zen, A., & Widjanarko, W. (2023). Pengaruh Current Ratio, Total Asset Turn Over, Debt To Equity Ratio Dan Covid-19 Terhadap Tingkat Return On Asset (Studi pada Perusahaan Subsektor Konstruksi Bangunan yang Terdaftar di Bursa Efek Indonesia Periode 2014 - 2021). *JURNAL ECONOMINA*, 2(10), 2920–2933. <https://doi.org/10.55681/economina.v2i10.925>
- Nisa, S. A., & Arismutia, S. A. (2026). Pengaruh Debt To Equity Ratio, Current Ratio, Dan Total Asset Turnover Terhadap Return On Equity Pada Perusahaan Sub Sektor Telekomunikasi Di Bursa Efek Indonesia Tahun. *JURNAL LENTERA BISNIS*, 15(1), 763–775. <https://doi.org/10.34127/jrlab.v15i1.2020>
- Novitta, M., & Juwanda, H. (2023). Pengaruh Total Assets Turnover Terhadap Return On Asset Pada Pt Pindad (Persero) Periode 2013 – 2017. *Jurnal Ekonomi Bisnis Dan Manajemen (Eko-Bisma)*, 2(1), 145–155. <https://doi.org/10.58268/eb.v2i1.31>
- Putri, S., & Sosrowidigdo, S. (2025). Pengaruh Current Ratio dan Debt To Equity Ratio terhadap Return On Assets pada Perusahaan Sub Sektor Perbankan Umum Konvensional yang Terdaftar di Bursaefek Indonesia Selama Periode 2021 – 2024. *Jurnal Semesta Ilmu Manajemen Dan Ekonomi*, 2(2), 58–70. <https://doi.org/10.71417/j-sime.v2i2.1122>
- Rahmawati, H. A., & Oktrima, B. (2026). Pengaruh Current Ratio dan Debt to Equity Ratio terhadap Return on Assets Pada PT Waskita Karya Tbk Periode 2014-2023. *SCIENTIFIC JOURNAL OF REFLECTION: Economic, Accounting, Management and Business*, 9(1), 273–280. <https://doi.org/10.37481/sjr.v9i1.1405>
- Ramadhan, A. F., & Nugroho, R. D. (2025). Pengaruh Current Ratio (CR), Debt To Equity Ratio (DER) Dan Total Asset Turn Over (TATO) Terhadap Return On Asset (ROA) Pada Perusahaan Pt Erajaya Swasembada Tbk Periode. *Jurnal Ilmiah Manajemen Dan Akuntansi*, 2(6), 83–96. <https://doi.org/10.69714/sr35xt89>
- Sari, W., Merliana, V., & Syarif, D. (2026). Pengaruh Total Asset Turnover, Debt to Equity Ratio, Current Ratio, dan Firm Size Terhadap Return on Asset. *ECo-Fin*, 8(1), 211–221. <https://doi.org/10.32877/ef.v8i1.3644>
- Sirait, P. (2017). *Analisis Laporan Keuangan*. Ekuilibria.
- Sriyana, N., & Sosrowidigdo, S. (2025). Pengaruh Current Ratio Dan Total Asset Turnover Terhadap Return On Asset Di Perusahaan Subsektor Food & Beverage Yang Terdaftar Di Bursa Efek Indonesia Periode 2021-2024. *Jurnal Akuntansi Pajak Dan Manajemen*, 8(2), 148–163. <https://doi.org/10.37601/tajam.v8i2.362>

Sugiyono. (2021). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*. Alfabeta.

Sujarweni, V. W. (2015). *Akuntansi Desa: Panduan Tata Kelola Keuangan Desa*. Pustaka Baru Press.

Copyrights

Copyright for this article is retained by the author(s), with first publication rights granted to the journal.

This is an open-access article distributed under the terms and conditions of the Creative Commons Attribution license (<http://creativecommons.org/licenses/by/4.0/>).

